

# State Wildlife Action Plans

## From Vision to On-the-Ground Action

Working together to prevent wildlife from becoming endangered





## Wildlife Conservationists are Turning Vision into On-the-Ground Action

Across the country, fish and wildlife agencies and their partners are turning the ambitious conservation vision of the state wildlife action plans into on-the-ground action. This nationwide strategy to prevent wildlife from becoming endangered is resulting in new partnerships, innovative conservation work, and cost-effective projects in every state.

Never before have scientists, conservationists, and communities come together on this scale to pursue common conservation goals. Fish and wildlife agencies are leading the way, reaching out to partners and initiating on-the-ground projects to conserve wildlife and vital natural areas. The diversity of partners and projects shows that these are practical action plans that will work in every state to conserve the land and waters essential to both wildlife and people.

Our nation's state fish and wildlife agencies have begun the critical work of implementing their wildlife action plans. The State Wildlife Grants program has provided the important first step in fully funding the state wildlife action plans. To effectively cope with ever-expanding conservation issues, such as climate change and invasive species, state fish and wildlife agencies require greater resources. With a greater public investment in the wildlife action plans, state fish and wildlife agencies and their partners can prevent species from becoming endangered and conserve wildlife and vital natural areas for future generations.



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California tiger salamander/Michael G. van Hatten



Rose-breasted grosbeak/Indiana Department of Natural Resources



Prickly pear/Bob Gillespie, Missouri Department of Conservation



Juvenile swans that became part of a relocation project/Montana Wetlands Legacy Program

## New Federal Funds for Wildlife Conservation

The wildlife action plans were developed as a requirement of two programs created by Congress in 2000: the Wildlife Conservation and Restoration Program and the State Wildlife Grants program. Both programs provide federal funding for preventing fish and wildlife from becoming endangered. The Wildlife Conservation and Restoration Program was enacted as an amendment to the landmark Pittman-Robertson Wildlife Restoration Act, and the State Wildlife Grants program was created through the congressional appropriations process.

Under both programs, the U.S. Fish and Wildlife Service distributes funds to state fish and wildlife agencies based on each state's population and land area. The federal funds must be matched by funding from state or other non-federal sources.

Although the Wildlife Conservation and Restoration Program was authorized as a permanent program, funding was only provided for the first year, while federal funding has continued to be appropriated to the State Wildlife Grants program. Together, the programs have resulted in more than \$500 million in new federal funding for wildlife conservation, combined with more than \$300 million in matching funds.

*The wildlife action plans represent a collective vision for the future of our nation's wildlife.*

# A Historic Effort for Wildlife

**T**he wildlife action plans represent a collective vision for the future of our nation's wildlife. State fish and wildlife agencies have examined in depth the full range of challenges and actions vital to keeping wildlife from becoming endangered. The wildlife action plans assess the condition of each state and territory's wildlife and habitats, identify the problems they face, and outline the actions that are needed to conserve them over the long term. They are tailored to reflect each state and territory's particular wildlife, habitat, and conservation needs.

The plans address landscape-level issues and identify targeted on-the-ground actions that can be implemented at the local level. By combining the

best scientific information with extensive public participation, states developed actions that are effective, yet practical, for wildlife and people.

The wildlife action plans put forth a national action agenda for the conservation of fish and wildlife species that have not received attention due to the lack of dedicated funding. Results are already apparent in creative new wildlife projects that tackle difficult problems and in the abundance of partnerships and improved relationships at all levels—across public and private land, across state boundaries, and in the growing list of new groups and individuals working together for fish and wildlife.

The biggest impediment to implementation of the wildlife action plans is insufficient funding for the state fish and wildlife agencies. Taking the timely next step to adequately fund the wildlife action plans is crucial in order to achieve the goal of preventing wildlife from becoming endangered.



Black oystercatcher in flight/Phil Mooney, Alaska Department of Fish and Game

## Putting Plans Into Action

Though it can seem overwhelming to implement all the conservation actions identified in the wildlife action plans, state fish and wildlife agencies are meeting this unprecedented conservation need head on. Across the country, state fish and wildlife agencies are reaching out to partners and initiating on-the-ground projects to conserve wildlife and vital natural areas.

In **Missouri**, Conservation Opportunity Areas identify the best places for partners to combine technology, expertise, and resources for all wildlife conservation. The **New York** Comprehensive Wildlife Conservation Strategy organizes priorities around the state's major watersheds, both to instill a sense of place to partners and to build on the state's successful watershed programs.

State fish and wildlife agencies are sitting down with stakeholders to turn the wildlife action plans into on-the-ground work. The **New Jersey** Department of Environmental Protection and Conserve Wildlife Foundation of New Jersey hosted two workshops in 2006 to identify the top statewide goals with the help of partners and interested stakeholders. Similarly, the **Montana** Fish, Wildlife and Parks Division hosted a workshop in 2007 to coordinate habitat conservation and restoration work in support of the Montana Comprehensive Fish & Wildlife Conservation Strategy. The involvement of the public in the implementation of these plans is necessary and important to ensure continued support of state-based wildlife conservation.

## Initiating On-the-Ground Action

State fish and wildlife agencies are implementing the common conservation needs in their wildlife action plans through partnerships with non-governmental organizations, private landowners, and other agencies. These efforts include conserving and restoring habitat for imperiled species, reintroducing rare wildlife, and addressing threats such as habitat loss, disease, competition from invasive species, and climate change. The **Idaho** Department of Fish and Game worked with Rocky Mountain Power, Clark Soil Conservation District, and the Bureau of Land Management to bury miles of power lines to reduce fragmentation of sagebrush habitat. The improved habitat benefits sage grouse, a priority species in Idaho's wildlife action plan. Diverse partnerships like this are cost-effective ways to conserve wildlife before they become more rare and costly to protect.



*These efforts include conserving and restoring habitat for imperiled species, reintroducing rare wildlife, and addressing threats such as habitat loss, disease, competition from invasive species, and climate change.*

## Protecting Imperiled Land, Water, and Wildlife The First-ever Amphibian and Reptile Conservation Area

Black bears, endangered salmon and other charismatic wildlife receive a lot of public interest and there are many conservation areas set aside just for birds. Amphibians and reptiles, however, are often overlooked, despite being the wildlife at greatest risk. In Iowa, many amphibians and reptiles are on the state's threatened and endangered list. Yet the Mississippi River floodplain in southeast Iowa is still home to enough amphibian and reptile species to be considered a diversity hotspot. In a historic effort, Iowa has created the first-ever Amphibian and Reptile Conservation Area across this 470,000-acre floodplain landscape. This area will protect critical habitat for such diverse species as the eastern massasauga, yellow mud turtle, pickerel frog, and central newt before they become more rare and costly to protect.

The wildlife action plans conserve wildlife and natural places, thereby protecting clean water and air—making both wildlife and people healthier. Nearly 100 years of pollution led to the loss of several fish species from **North Carolina's** Pigeon River, including striped and silver shiners, priority species in the state's wildlife action plan. The North Carolina Wildlife Resources Commission works with local and federal partners to



collect these and other native fish species from the wild and place them into a rehabilitated stretch of Pigeon River. Gilt darters and silver, striped, telescope, mirror, and saffron shiners have been reintroduced; follow-up sampling indicates the fish are surviving and reproducing. Maintaining healthy populations of wildlife in North Carolina's rivers means cleaner and healthier waters overall, benefiting people as well.

Flexibility and the capacity to develop innovative conservation approaches through the wildlife action plans help state fish and wildlife agencies efficiently and cost-effectively conserve wildlife and vital natural areas. Hurricane Charley provided **Florida** with a unique restoration opportunity in 2004 by blowing down thousands of non-native Australian pines. After the hurricane, the city of Sanibel re-established over 200 acres of diverse wildlife habitat at Bowman's Beach Park. Over 21,000

native trees and shrubs were replanted including strangler fig, gumbo limbo, and mahogany trees that provide important habitat for migratory songbirds. This cost-effective restoration project will allow citizens and tourists to experience the tens of thousands of warblers, vireos, orioles and tanagers that migrate through the area every spring and fall.



Mono Basin, California/Lief Wiechman

**Reaching Out and Educating the Public**

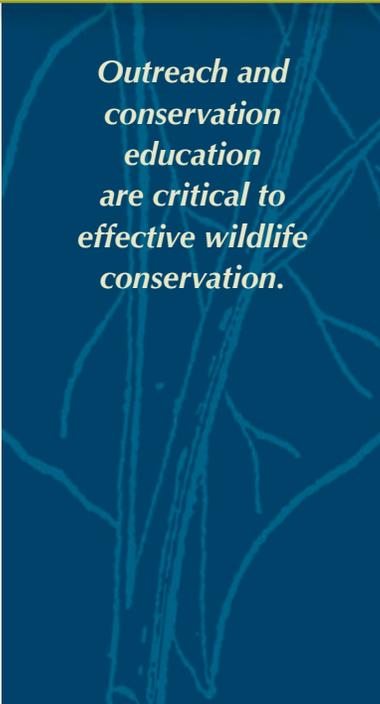
Outreach and conservation education are critical to effective wildlife conservation. **Oregon's** wildlife action plan identifies invasive species as a key problem. The state is trying to hold the line against non-native quagga mussels that are rapidly invading the country. States infested with these mussels spend millions of dollars to keep water systems unclogged and natural systems intact. To prevent this from happening in Oregon, the Department of Fish and Wildlife, Marine Board, and conservation groups are hosting workshops, boat washing demonstrations, and media events to educate citizens about the risks of quagga mussels. Recently, these efforts paid off with the early detection and quarantine of a quagga-infested boat. Prevention, early detection, and swift action will help protect Oregon's native fish and wildlife from invasive species before more costly measures are needed.

**Gathering Information to Take Action**

In addition to laying out many important actions, the wildlife action plans also highlight gaps in knowledge. Baseline information on little known wildlife and habitats is needed so that strategic and cost-efficient management efforts can be undertaken to conserve wildlife and natural areas. Conservation of the long-billed curlew is a high priority in **North Dakota** due to the bird's declining numbers. Understanding the population size and distribution of long-billed curlews is important to biologists who are concerned that widespread alteration and loss of habitat may be jeopardizing this species. Recent surveys revealed that a small

**Proactive Efforts that Benefit Wildlife and People Involving the Public in Conservation**

Michigan's wildlife action plan identifies public education about conservation threats to wildlife and habitats as a priority action needed to improve conservation delivery. Michigan's Conservation Stewards Program delivers high quality, locally-based education and training to create an informed citizenry who will practice community-based volunteer conservation activities. Thus far, nearly 100 Conservation Stewards have been certified and have already contributed over 3,800 hours of volunteer service worth more than \$70,000. Assessments of participants indicate positive shifts in their ecological knowledge and their connection to the land, which greatly benefits efforts to conserve wildlife and natural areas for future generations.



*Outreach and conservation education are critical to effective wildlife conservation.*

population exists in the southwestern part of the state and survey routes have been established so biologists can monitor and conserve this graceful bird for future generations.

## Working Together For Wildlife

The wildlife action plans are strategic, comprehensive plans that guide conservation work for the full complement of wildlife species. State fish and wildlife agencies seek collaboration with other state agencies, federal agencies, non-profit conservation organizations, universities, and local governments for wildlife action plan implementation. Improved and innovative wildlife conservation on public and private lands has resulted from these cooperative efforts.

Federal partnerships range from traditional land and resource management partners such as the Natural Resources Conservation Service, U.S. Fish and Wildlife Service, U.S. Forest Service, Bureau of Land Management, National Park Service, and U.S. Geological Survey to new partnerships with the Army Corps of Engineers, Department of Defense, Environmental Protection Agency, and Federal Highway Administration.

The wildlife action plans also facilitate collaboration with local governments, hunter and angler groups, other conservation organizations, universities, and private citizens. Such partnerships are essential to effective implementation of the wildlife action plans. In order for state fish and wildlife agencies to maintain and expand these vital partnerships, they need dedicated funding for the conservation of all fish and wildlife.

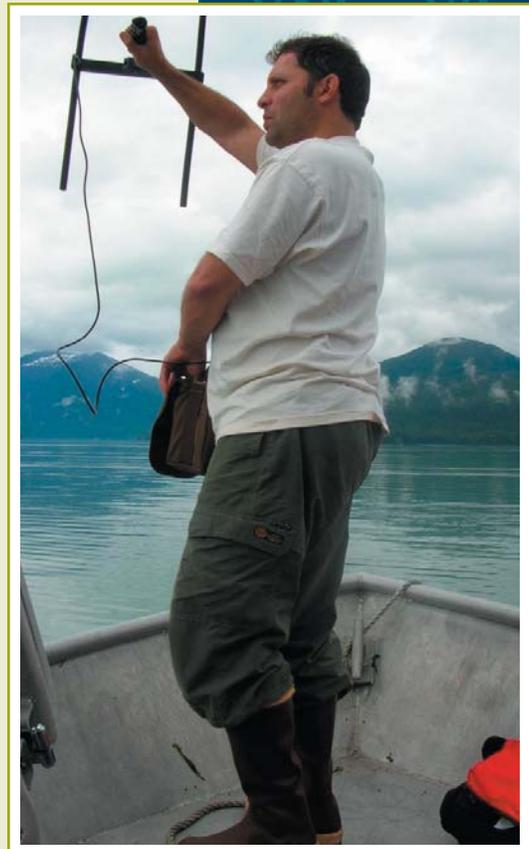
## Gathering Information to Take Action Keeping Marbled Murrelets Common in Alaska

The marbled murrelet is a seabird that nests in old-growth forests and is threatened in most of its range. Although the bird is not classified as threatened in Alaska, it is a featured species in the state wildlife action plan because the population may be declining and the marbled murrelet is particularly sensitive to environmental disturbance. The long-term fate of this enigmatic bird may rest on how well it does in Alaska where old-growth forest habitat is relatively intact and marine feeding areas are well conserved. Marbled murrelets' preferred nesting areas, timing of egg-laying and hatching, and feeding habits are being studied by the Alaska Department of Fish and Game in order to make sound management decisions to keep this unique bird common in Alaska and ensure its long term survival.

## Collaborative Conservation on Military Lands

The Department of Defense manages 29 million acres of land around the nation, including many important areas of habitat for fish and wildlife. Urbanization and other land uses that fragment habitat can also encroach on military bases, leading to conflicts with local communities over training and testing activities. By working together, state fish and wildlife agencies and military installations can help prevent wildlife from becoming endangered and enhance the testing and training needed to safeguard national security.

During 2006 and 2007, the Department of Defense held workshops around the nation to bring together military installations, state wildlife agencies, and the U.S. Fish and Wildlife Service



Tracking a marbled murrelet/Alaska  
Department of Fish and Game

*By working together, state fish and wildlife agencies and military installations can help prevent wildlife from becoming endangered and enhance the testing and training needed to safeguard national security.*

to develop collaborative ways to integrate state wildlife action plans with installation natural resources management plans. These workshops have already resulted in several on-the-ground projects to restore habitats and enhance information sharing across organizational boundaries. For example, a habitat restoration project on **South Carolina** airfields seeks to remove invasive weeds and replace them with native plants in order to restore native habitat without increasing aircraft-bird collision hazards.

### ***Taking Action with Private Lands Partners***

The U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) has long played a pivotal role in conservation on private lands. NRCS has adopted the wildlife action plans as tools to enhance the benefits of the Wildlife Habitat Incentives Program for imperiled fish and wildlife. As soon as the

wildlife action plans were completed, state NRCS offices began integrating wildlife action plan recommendations into this valuable conservation program, targeting dollars at species of conservation need and habitats with the greatest value for at-risk wildlife. In Arkansas, NRCS created the Arkansas Valley Prairie

and Woodland Focal Area based on **Arkansas'** wildlife action plan and will focus funding to restore native grassland habitat within the focal area for northern bobwhite quail, Henslow's sparrows, and other wildlife.

### ***Working Together with Sportsmen and Women***

As a member of the **Nebraska** Natural Legacy Partnership Team, Nebraska Pheasants Forever has taken a leadership role in the development and implementation of Nebraska's wildlife action plan. Pheasants Forever and its sister organization, Quail Forever, have dedicated staff to reach out to private landowners to implement Nebraska's wildlife action plan within priority landscapes. The support and involvement of private conservation organizations is essential to the successful implementation of Nebraska's wildlife action plan.

### ***Taking Action with Land Conservation Organizations***

The Heart of the Rockies Initiative is a federation of conservation land trusts throughout Montana, Idaho, Wyoming, and Alberta, Canada. They have partnered with the **Montana** Fish, Wildlife, and Parks Division to determine where gaps exist between current programs and what is necessary to implement the Montana Comprehensive Fish & Wildlife Conservation Strategy. With this information, the Initiative and the Department will more effectively collaborate on their shared agenda for habitat conservation and restoration.

### ***Finishing the Job: Investing in the Wildlife Action Plans***

As illustrated on the following pages, the wildlife action plans are taking root within the state fish and wildlife agencies and throughout the entire conservation community. Fish and wildlife agencies and their partners are putting wildlife action plan projects on the ground, leveraging funds, and making significant strides in conserving fish and wildlife and the places they live for future generations.



Riparian ecosystem along the Gila River/  
New Mexico Department of Game and Fish

As a complement to traditional game and sportfish management programs and endangered species recovery efforts, the wildlife action plans provide the crucial final piece to our nation's fish and wildlife conservation agenda.

The state fish and wildlife agencies developed the wildlife action plans at the request of Congress, following the enactment of the Wildlife Conservation and Restoration Program and State Wildlife Grants program in 2000. In creating these programs, Congress took a bold step to define a new preventive approach to conservation. This approach is based on the demonstrated success of the current federal-state partnership through the Pittman-Robertson Wildlife Restoration Act and the Dingell-Johnson/Wallop-Breaux Sportfish Restoration and Boating Access Act, which combine federal and state funds to fund on-the-ground work in every state and territory.

The wildlife action plans build on this model of success by drawing together all of the best thinking and theory about the conservation needs of at-risk fish and wildlife. The agencies and their partners rose to the challenge to develop the wildlife action plans, and seized it as an opportunity to outline innovative, comprehensive approaches to conserving fish and wildlife and their habitats.

Over the last six years, Congress has provided more than more than \$500 million in new money for wildlife conservation through State Wildlife Grants and the Wildlife Conservation and Restoration Program. These funds have been matched with over \$300 million from the state fish and wildlife agencies.

However, the needs identified by the wildlife action plans are much greater than current funding. Though the State Wildlife Grants program is a good start,

much more funding is needed to meet ever growing wildlife conservation challenges. State fish and wildlife agencies need at least \$1 billion more

## Funding for Wildlife Conservation

Historically, funding for state fish and wildlife agencies has come primarily from license fees and excise taxes paid by hunters and anglers. State dollars are used to match federal funds provided through the Pittman-Robertson Wildlife Restoration Act and the Dingell-Johnson/Wallop-Breaux Sportfish Restoration and Boating Access Acts.

Over the years, states have also developed a variety of other funding sources for wildlife conservation. Some agencies receive funding through voluntary tax check-offs, specialty license plates, or private donations. These mechanisms bring in an average of just \$200,000 per state; which is often inadequate to implement conservation actions for a single imperiled species. A few states have a conservation sales tax, such as Arkansas' one-eighth of one percent sales tax that is dedicated to wildlife conservation. Most states, however, are almost entirely dependent on voluntary contributions for their wildlife diversity budgets. Thirteen states, including Alabama, Colorado, Iowa, Idaho, Indiana, Kentucky, Massachusetts, Maryland, Maine, North Dakota, Ohio, Oklahoma, South Dakota, and Wyoming provide no general fund support to their fish and wildlife agencies.

Enhanced federal funding for State Wildlife Grants and the Wildlife Conservation and Restoration Program will lead to even greater efforts to find new sources of state-level funding for fish and wildlife conservation.

each year to adequately conserve wildlife and their habitats. States are losing battles to combat non-native species invasions that jeopardize an ever increasing number of native wildlife.

### ***Wildlife Imperiled by Our Warming Climate***

A growing body of scientists is sounding alarm bells that our changing climate is imperiling fish and wildlife, including those already rare and declining as well as populations currently abundant. The state wildlife action plans can help reduce existing stresses on wildlife populations and their habitats so they are healthy and more resilient to the impacts of climate change.

***As a complement to traditional game and sportfish management programs and endangered species recovery efforts, the wildlife action plans provide the crucial final piece to our nation's fish and wildlife conservation agenda.***

## Teaming with Wildlife: A National Coalition

Teaming with Wildlife is a coalition of more than 5,500 agencies and organizations that support increased public funding for wildlife conservation and related education and recreation. It is the largest and most diverse coalition ever assembled on behalf of wildlife, representing all 50 state fish and wildlife agencies, wildlife biologists, hunters and anglers, birdwatchers, hikers, nature-based businesses and other conservationists who support the goal of restoring and conserving our nation's wildlife.

The coalition's approach to funding is three-pronged: funding for wildlife conservation, wildlife-related recreation, and conservation education. The Teaming with Wildlife Coalition continues to grow and advocate for a long-term solution to wildlife conservation funding. Such funding is essential for state fish and wildlife agencies to fulfill their responsibility to conserve wildlife and natural areas.

The wildlife action plans focus on habitats and on the protection and restoration of important landscapes and watersheds. By doing so, they can provide a crucial starting point for developing large-scale strategies for dealing with an issue of the magnitude of climate change. Such efforts protect clean water and air, benefiting both wildlife and people.

More than ever, it is important for state fish and wildlife agencies to be proactive toward fish and wildlife conservation. Additional resources are required to take the action necessary to confront climate

change and conserve wildlife before they become more rare and more costly to protect.

Greater investment is necessary to address these and other large-scale impacts in order to prevent wildlife species from declining to the point where costly endangered species listings are necessary. With a greater public investment in the wildlife action plans, state fish and wildlife agencies and their partners can prevent species from becoming endangered and conserve wildlife and vital natural areas for future generations.



Marbled salamander/Jack Ray

## How You Can Help

**Join Teaming with Wildlife** at [www.teaming.com/action](http://www.teaming.com/action). By joining the coalition, your organization adds its voice to the call for new and greater funding for wildlife conservation, which will be essential in implementing the state wildlife action plans.

**Help implement your state's wildlife action plan on the ground.** Each state is working with partners to determine priorities for action and how organizations can contribute to the plan's implementation. Contact your state's wildlife action plan implementation coordinator via [www.wildlifeactionplans.org](http://www.wildlifeactionplans.org).

**Talk to Congress.** Ultimately our goal is to educate decision-makers on the need for new and greater funding for wildlife conservation and related recreation and education. Your organization can play a key role in making that happen by sending action alerts on key legislative issues related to State Wildlife Grants and the state wildlife action plans. For the latest specifics, go to [www.teaming.com/action](http://www.teaming.com/action).

*The needs identified by the wildlife action plans are much greater than current funding. State fish and wildlife agencies need at least \$1 billion more each year to adequately conserve wildlife and their habitats.*

# Alabama Wildlife Action Plan

## From Vision to On-the-Ground Action

**A**labama's wildlife action plan puts particular emphasis on the needs of species whose populations are declining due to habitat loss and fragmentation. Other threats to Alabama's land and waterscapes are loss of natural community integrity, impacts from disturbance and exotic species, and lack of adequate protection and/or information. The Department of Conservation and Natural Resources intends to work proactively to stop such declines and to minimize the need to protect additional species under the Endangered Species Act.

### *Working with Partners to Bring Back Wildlife and Natural Areas* **Conserving the Aquatic Diversity of Paint Rock River**

The Paint Rock River basin is one of the most biologically diverse watersheds in North America and a high priority area in the Alabama Wildlife Action Plan. Over 30 fish, mussel, and snail species of greatest conservation need historically or currently inhabit the

basin. With support from the Landowner Incentive Program and other federal funds, the Alabama Division of Wildlife and Freshwater Fisheries and The Nature Conservancy are working together to proactively restore stream habitat in the basin. This partnership is making major strides and has already restructured some of the stream bank and replanted native vegetation. Restoring the Paint Rock means cleaner water that benefits people as well as the river's more than 150 species of native fish, mussels, and snails.

*The Paint Rock River basin is one of the most biologically diverse watersheds in North America and a high priority area in the Alabama Wildlife Action Plan. Restoring the Paint Rock means cleaner water that benefits people as well as the river's more than 150 species of native fish, mussels, and snails.*



Before the restoration of Paint Rock River/  
C. Oberholster, The Nature Conservancy



After the restoration of Paint Rock River/C. Oberholster, The Nature Conservancy

## ***Gathering Information to Take Action*** **Conserving Alabama's Unique Crayfish Diversity**

Filling data needs is a high priority in Alabama's wildlife action plan, allowing us to identify and prevent problems before they threaten wildlife and people. Alabama's aquatic diversity is among the richest of any comparably-sized area in the world, including more crayfish species than any other state. As a result of a State Wildlife Grants funded project, Alabama's crayfish database now holds over 4,600 records for 85 species with proper identifications and geographic references. Gathering this important information will allow the Department of Conservation and other partners to focus future conservation efforts on poorly represented species and habitats to conserve these aquatic animals before they become rare and costly to protect.

### ***Protecting Imperiled Land, Water, and Wildlife***

## **Restoring Gopher Tortoises**

Gopher tortoise restoration is a high priority conservation action in Alabama's wildlife action plan due to their importance to so many other species and their perilously low numbers. Gopher

tortoise burrows are used by more than 300 other species, including some rare amphibians and reptiles in Alabama. Many local populations of gopher tortoises were decimated or lost entirely during the 20th century due to habitat modification and human collection. The Alabama Department of Conservation has begun a pilot project to reestablish gopher tortoises on the 1,500-acre Wehle Tract owned by the Forever Wild Land Trust. This project will also determine the best methods for future reintroductions, so the most cost-effective and efficient efforts can be undertaken to conserve this reptile for future generations.

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Okaloosa crayfish/Guenter Schuster,  
Eastern Kentucky University

***Gopher tortoise  
restoration is  
a high priority  
conservation action  
in Alabama's wildlife  
action plan due to  
their importance  
to so many other  
species and their  
perilously low  
numbers.***



Gopher tortoise/M. Bailey, Conservation Southeast

# Alaska Wildlife Action Plan

## From Vision to On-the-Ground Action

The Alaska wildlife action plan highlights conservation needs common to large numbers of species and the habitats that support them. In addition, it provides specific action plans for 74 featured species and species groups ranging from little known cave insects to familiar species such as loons, owls, and whales.

### *Working with Partners to Bring Back Wildlife and Natural Areas* **Conserving Black Oystercatchers with Many States and Countries**

The black oystercatcher is one of the rarest shorebirds in North America and is a featured species in the wildlife action plans of every state in which it occurs. The Alaska Department of Fish and Game spearheaded the creation of the collaborative International Black Oystercatcher Conservation Plan. Every state and federal agency in the U.S. and Canada with management jurisdiction over the species or its habitat is already using the plan as the basis for all conservation work throughout the species' entire range. International projects underway include a regional assessment of ecology and threats in the northern range, a southern

population size estimate, a population genetics investigation, and a satellite telemetry study to determine seasonal migration patterns and habitat use. This conservation work, coordinated between multiple states and countries, will help conserve the black oystercatcher before it becomes more rare and more costly to protect.

### *Proactive Efforts that Benefit Wildlife and People* **Sustainably Managing Kachemak Bay Clams**

Obtaining better information in order to make smart management decisions is a priority in Alaska's wildlife action plan. Kachemak Bay is one of the most productive, diverse, and intensively used estuaries in Alaska. The hardshell clam fishery here is Alaska's largest and is important to many family traditions, but

*Conservation work coordinated between multiple states and countries will help conserve the black oystercatcher before it becomes more rare and more costly to protect.*



Black oystercatchers/Phil Mooney, Alaska Department of Fish and Game

the lack of sufficient information makes it difficult to ensure sustainable use. Through research currently underway, Alaskan biologists have learned more

about where and how clams grow. With this information, wildlife managers are better able to monitor the health of these populations and ensure good

conservation of Alaska's hardshell clam resource for the enjoyment and benefit of future generations.



Growth rings on a clam/Carol Kerkvliet, Alaska Department of Fish and Game

### **Gathering Information to Take Action Keeping Marbled Murrelets Common in Alaska**

The marbled murrelet, once called the "enigma of the Pacific," is a seabird that nests in old-growth forests and is a featured species in Alaska's wildlife action plan due to its risk for population decline. The long-term fate of the marbled murrelet, listed as threatened elsewhere in its range, may hinge on how well it does in Alaska, where its old-growth

forest habitat is relatively intact and marine feeding areas are mostly pristine. To better understand the factors that are important to Alaskan populations, the Alaska Department of Fish and Game is supporting research to identify preferred nesting habitats, timing of egg-laying and hatching, activity patterns, and feeding habits. This research will help Alaska make good, cost-effective management decisions regarding this unique bird and the habitat it needs for survival.

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*The long-term fate of the marbled murrelet, listed as threatened elsewhere in its range, may hinge on how well it does in Alaska, where its old-growth forest habitat is relatively intact and marine feeding areas are mostly pristine.*



Marbled murrelet with radio transmitter/Alaska Department of Fish and Game

# Arizona Wildlife Action Plan

## From Vision to On-the-Ground Action

The Arizona wildlife action plan is built on the premise that the most effective way to conserve rare, declining, and common wildlife is to restore and conserve healthy areas to live. Therefore it focuses on habitat types, such as desert scrub, grasslands, forests, woodlands, and aquatic and riparian systems. The 70 priority stressors identified relate to four statewide phenomena: a rapidly increasing human population, changes to water storage and delivery systems in the Southwest, alteration of communities by invasive species, and the ongoing drought and warming trend.

*A one-day survey with 48 volunteers revealed over 36,000 aquatic birds of 55 species wintering in urban Phoenix, numbers unmatched by any comparably-sized area in Arizona.*

### **Proactive Efforts that Benefit Wildlife and People**

#### **Conserving Wild Birds in Urban Phoenix**

As Arizona grows, the monitoring components of Arizona's wildlife action plan will help us fulfill our responsibility to conserve wildlife and the places they live for future generations. New

residential lakes and golf course ponds in the fast-growing Phoenix metropolitan area increasingly attract wintering aquatic birds, many of which are priority species. The volunteer-based Urban Phoenix Winter Aquatic Bird Survey was established to assess these populations and help effectively manage them. A one-

day survey using 48 volunteers revealed over 36,000 birds of 55 species wintering in this otherwise desert urban area, numbers unmatched by any comparably-sized area in Arizona. This annual survey helps identify areas of potential urban conflict, which could include birds eating

stocked fish in urban lakes or damaging turf at parks. This proactive work will help make good management decisions regarding aquatic birds and help maintain opportunities for urban wildlife watching.

### **Working with Partners to Bring Back Wildlife and Natural Areas**

#### **Bringing Back Arizona's Bald Eagles**

Bald eagles occur on lands managed by different agencies and Native American tribes, requiring cooperation among many groups to ensure the species' survival – a key priority in Arizona's wildlife action plan. The Arizona Game and Fish Department chairs the Southwestern Bald Eagle Management Committee, a collaborative group of 23 agencies, Native American Tribes, and private organizations who monitor the population to help guide management actions. Through the Arizona Bald Eagle Nestwatch Program, nest watchers monitor eagles, observe their behavior, educate the public, and help protect eagles during their breeding season. These two efforts help biologists and decision-makers conserve bald eagles for future generations while maintaining compatible recreational and educational opportunities for the public.



American wigeon/Bruce Taubert, Arizona Game and Fish Department

## Gathering Information to Take Action Conserving the Page Springsnail

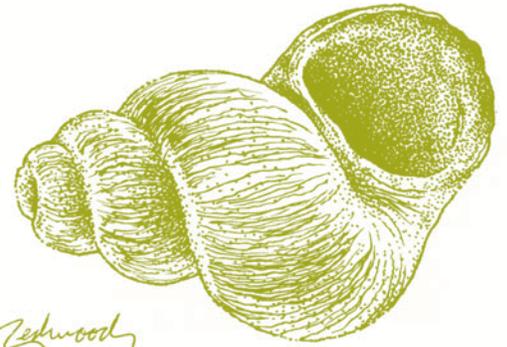
Figuring out where priority wildlife live is crucial to their survival and a priority in Arizona's wildlife action plan. The spring-dwelling Page springsnail is a candidate for listing under the Endangered Species Act and a species of greatest conservation need. In cooperation with private landowners, a survey of wildlife along Spring Creek yielded the discovery of a new population of Page springsnails, making seven known populations of the snail in Arizona. Using this information, the Arizona Game and Fish Department and the U.S. Fish and Wildlife Service are finalizing a conservation agreement for the springsnail. Improving knowledge of this rare snail will help prevent it from becoming more rare and costly to protect, therefore avoiding potential conflicts over another endangered species listing.

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### Arizona Game and Fish Department

5000 W. Carefree Highway  
Phoenix, AZ 85086  
[http://www.azgfd.gov/w\\_c/cwcs.shtml](http://www.azgfd.gov/w_c/cwcs.shtml)



Page springsnail/Nathan Redwood



Adult bald eagle/David Lamkin, Arizona Game and Fish Department



Bald eaglets/Bruce Taubert, Arizona Game and Fish Department

*Improving knowledge of the Page springsnail will help prevent it from becoming more rare and costly to protect, avoiding potential conflicts over another endangered species listing.*

# Arkansas Wildlife Action Plan

## From Vision to On-the-Ground Action

The Arkansas wildlife action plan addresses the needs of 369 species of greatest conservation need in terrestrial habitats and aquatic habitats across seven ecoregions in Arkansas. Habitat fragmentation and groundwater depletion are among the threats facing wildlife identified in the wildlife action plan.

### Protecting Imperiled Land, Water, and Wildlife

#### Restoring Ozark Highlands

Restoration of woodland systems is a high priority in Arkansas' wildlife action plan. Fire suppression in the Ozark

highlands has allowed non-native plants to invade and tree density to exceed historic levels, crowding out natural understory plant diversity. The Arkansas Game & Fish and Natural Heritage Commissions and the Missouri Department of Conservation are working together to restore pine-oak woodlands. In Arkansas, over 4,500 acres of pine and oak woodland savanna, glades, and woodlands were restored using controlled burns, cedar removal from glades, and forest thinning. Restored understory will benefit many species of greatest conservation need,

including eastern tiger salamanders, bobwhite quail, Bewick's wrens, painted buntings, and more. This proactive management will conserve wildlife and vital natural areas for future generations.

### Proactive Efforts that Benefit Wildlife and People

#### Conserving Imperiled Prairie Wildlife

Henslow's sparrows and other grassland wildlife are species of greatest conservation need in Arkansas' wildlife action plan. A State Wildlife Grants project revealed several unknown populations of breeding Henslow's sparrows in northwest Arkansas, with the largest in Cherokee Prairie Natural Area. This area falls within the Arkansas Valley Prairie and Woodland Focal Area where the Natural Resources Conservation Service will focus funding to restore native grassland habitat for northern bobwhite quail and Henslow's sparrows. In addition, new information on wintering Henslow's sparrows in Warren Prairie Natural Area, home to 30 other wildlife and plant species of concern, helped guide restoration efforts

*In Arkansas, over 4,500 acres of pine and oak woodland savanna, glades, and woodlands were restored using controlled burns, cedar removal from glades, and forest thinning.*



Fire crew in the Ozarks/Keith Stephens, Arkansas Game and Fish Commission



Henslow's sparrow/Bill Holimon, Arkansas Natural Heritage Commission

on pine barrens and focused acquisition projects in southern Arkansas. This vital information will help biologists, land stewards, and conservation planners throughout the southeastern U.S. conserve important grassland habitat and wildlife before they become more rare and more costly to protect.

### ***Working with Partners to Bring Back Wildlife and Natural Areas*** **Restoring Wetlands at the Clinton Presidential Library**

Restoring wetlands to benefit imperiled wildlife is an important priority in Arkansas' wildlife action plan. Working with many local, state, and congressional partners, the Arkansas Game and Fish Commission and Audubon Arkansas are leading an effort to restore wetlands along the Arkansas River in downtown Little Rock. The restoration will turn a degraded, littered wetland into a wildlife haven for many species of greatest conservation need. The aquatic wetlands

will be restructured and native plants will be restored to better suit the needs of spawning fish and other wildlife. These restored wetlands will provide clean water for wildlife and people, while enhancing Little Rock's quality of life with urban wildlife watching opportunities.

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[www.wildlifeactionplans.org](http://www.wildlifeactionplans.org)

### **Arkansas Game and Fish Commission**

2 Natural Resources Drive  
Little Rock, Arkansas 72205  
<http://www.wildlifearkansas.com/>



Cherokee Prairie/Arkansas Natural Heritage Commission



Former President Bill Clinton announces the William E. Clark Presidential Park Wetlands Project/Keith Stephens, Arkansas Game and Fish Commission

*Working with many local, state, and congressional partners, the Arkansas Game and Fish Commission and Audubon Arkansas are leading an effort to restore wetlands along the Arkansas River in downtown Little Rock.*

# California Wildlife Action Plan

## From Vision to On-the-Ground Action

California's wildlife action plan takes an ecosystem approach that recognizes the interdependence of multiple species and their habitats and also considers the needs of select species. The wildlife action plan is organized into nine geographic regions and identifies five key issues: integrating wildlife conservation into local land-use decisions, restoring and connecting riparian habitats, providing essential water for fish and wildlife, controlling invasive species, and expanding conservation education.

*An alliance of 16 partners have come together to conserve habitat and restore tricolored blackbird populations without listing the species as threatened or endangered.*

### *Protecting Imperiled Land, Water, and Wildlife*

#### **Conserving Greater Sage-grouse**

Greater sage-grouse is a species of special concern in California's wildlife action plan. Greater sage-grouse habitat in California has degraded in recent years resulting in population declines and losses statewide. Information is needed to

develop conservation strategies to prevent further losses of this sagebrush-dependent bird. The California Department of Fish and Game is working with the University of Idaho to better understand how populations are linked across the landscape and the quality of existing habitat conditions. Biologists are radio-tracking sage

grouse throughout their lives. This project will ultimately provide vital information about the species to a variety of public and private stakeholders in sage grouse conservation. It also provides site-specific information that is essential for making informed and cost effective decisions to conserve the greater sage-grouse for future Californians.

### *Working with Partners to Bring Back Wildlife and Natural Areas*

#### **Collaborating for Tricolored Blackbird Conservation**

California is home to 99 percent of the world's population of tricolored blackbirds, which are a species of special concern in the state wildlife action plan. The tricolored blackbird population has dropped drastically in the last 60 years, along with the decline of native wetlands in California's Central Valley. In the absence of these wetlands, the birds commonly nest in silage fields, ditches, and other areas around dairy farms. This is a serious risk when fields are ready for harvest and young birds cannot yet fly. An alliance of 16 partners have come together to conserve habitat and restore tricolored blackbird populations without listing the species as threatened or endangered. This diverse partnership

includes the California Department of Fish and Game, Audubon California, California Farm Bureau, California Cattlemen's Association, Pacific Gas & Electric Company, and University of California. This voluntary



Sage grouse chick/Santiago Escruceria



Tri-colored blackbird/William Hamilton III

and proactive effort will conserve the tricolored blackbird and may avoid another costly endangered species listing.

***Proactive Efforts that Benefit Wildlife and People***

## **Conserving Burrowing Owls in California**

The Department continued to develop a conservation strategy for burrowing owls, a priority species in California's wildlife action plan. The strategy will provide resource managers and researchers with vital information on the burrowing owl, including its conservation needs. By emphasizing outreach to different stakeholders and analyzing current information, the strategy will help state and federal partners set priorities. The Institute for Bird Populations finished a two-year study for burrowing owls statewide, with help from the National Fish and Wildlife Foundation and the California Department of Fish and Game. This vital information will provide a strong foundation for the conservation strategy, and a basis for comparison to a similar effort conducted in the

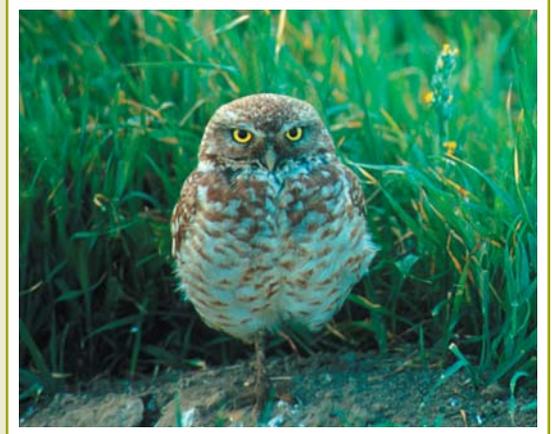
early 1990s. Effort was also invested in updating existing mitigation guidance for projects affecting owls and their habitat. This information is vital for protecting burrowing owls and ties into the land use planning theme of the wildlife action plan, helping to conserve owls and their habitat before they decline to the point of becoming threatened or endangered.

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### **California Department of Fish and Game**

1812 9th Street  
Sacramento, CA 95814  
<http://www.dfg.ca.gov/wildlife/WAP/>



Burrowing owl/© Daniel K. Rosenberg

*The Department continued to develop a conservation strategy for burrowing owls, a priority species in California's wildlife action plan. The strategy will provide resource managers and researchers with vital information on the burrowing owl, including its conservation needs.*



Burrowing owl habitat/© Daniel K. Rosenberg

# Colorado Wildlife Action Plan

## From Vision to On-the-Ground Action

Colorado's wildlife action plan reviews priority species and 41 landscape types to identify the highest conservation priorities for species and habitat conservation, restoration, enhancement, and research. Given an expected increase in the state's population of more than 50% over the coming 25 years, the primary challenges to Colorado's wildlife are the conversion and fragmentation of habitat, human use and depletion of natural resources, pollution, introduction of invasive and exotic species, and alteration of ecological processes.

### *Working with Partners to Bring Back Wildlife and Natural Areas*

#### **The Rio Grande Initiative**

Colorado's wildlife action plan identifies the Rio Grande River as important habitat for the endangered southwestern willow flycatcher and for rare fish such as the Rio Grande cutthroat trout and Rio Grande chub. As Colorado grows, this valuable habitat and open space is under pressure from the subdivision of farms and ranches into vacation properties. Through a proactive State Wildlife Grant of just \$16,000, the Colorado Division of Wildlife helped the Rio Grande Headwaters Land Trust

complete a strategic mapping project which later attracted \$7.4 million in state lottery funds, the largest award to a private conservation organization. The plan developed through The Rio Grande Initiative includes information that will help focus the habitat conservation efforts of more than 25 partners, including federal, state and local agencies, county governments, and conservation organizations. Ultimately, the Rio Grande Headwaters Trust aims to protect 27,000 acres or nearly half of the large parcels of private lands in the river corridor, conserving the wildlife and natural places that are so important to our family traditions.

*Colorado's wildlife action plan identifies the Rio Grande River as important habitat for the endangered southwestern willow flycatcher and for rare fish such as the Rio Grande cutthroat trout and Rio Grande chub.*



A Rio Grande wetland/Rio de la Vista

## *Gathering Information to Take Action* **Conserving the Olive-backed Pocket Mouse**

The olive-backed pocket mouse is a Tier 1 species in Colorado's wildlife action plan because it could be imperiled by rapid development of its natural habitat, but little is known about the species in the state. To address this significant shortfall in information, the Colorado Division of Wildlife directed \$26,000 in State Wildlife Grants Program funds toward a project, led by a University of Northern Colorado researcher, to determine the olive-backed pocket mouse's range and population trends in Colorado. The vital information provided by this study will help the Colorado Division of Wildlife and its partners take proactive actions to conserve the olive-backed pocket mouse before it declines to a level that might require costly protections under the Endangered Species Act. This proactive effort is just one way Colorado's wildlife action plan will help this growing state conserve wildlife and the places they live for future generations.



Olive-backed pocket mouse/  
Adam Messer, Montana Fish, Wildlife and Parks

## *Proactive Efforts that Benefit Wildlife and People* **Collaborating for Gunnison Sage-grouse Conservation**

The survival of the Gunnison sage-grouse, a Tier 1 species in Colorado's wildlife action plan, largely depends on its fate in the Gunnison Basin, home to three-quarters of its population. Numerous State Wildlife Grants-funded projects are completing priority conservation actions outlined in the wildlife action plan. Colorado Audubon has created a citizen volunteer corps to monitor habitat

conditions in the Gunnison Basin and to improve habitat on other public and private lands. Colorado State University will create a habitat guide to help private and public land managers adapt their grazing and land management practices to benefit sage grouse. Conservation easements now protect nearly 4,000 acres of high quality sage grouse habitat. These cooperative actions involving the public, private conservation groups, sportsmen, landowners and federal land managers will help the Gunnison sage-grouse survive on a working landscape, without the costly disruptions that would come with an endangered species listing.

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## **Colorado Division of Wildlife**

6060 Broadway  
Denver, CO 80216  
<http://wildlife.state.co.us/WildlifeSpecies/ColoradoWildlifeActionPlan/>



Gunnison sage-grouse/Colorado Division of Wildlife

*These cooperative actions involving the public, private conservation groups, sportsmen, landowners and federal land managers will help the Gunnison sage-grouse survive on a working landscape.*

*The Grassland Habitat Conservation Initiative brings together a range of groups in support of proactive conservation including the Connecticut Farmland Trust, Audubon groups, academic institutions, municipal organizations, and many state and federal agencies.*

# Connecticut Comprehensive Wildlife Conservation Strategy

## From Vision to On-the-Ground Action

Implementing the actions in Connecticut's Comprehensive Wildlife Conservation Strategy is already improving Connecticut's quality of life by conserving the diversity of ecosystems and wildlife in the state. The likelihood of new species being listed as threatened or endangered will be minimized, helping to keep today's common species common in the future. By identifying the species and habitats of greatest conservation need, and defining the actions and research needs required to conserve them, the conservation strategy serves as a comprehensive guide to conserve all of Connecticut's wildlife.

### *Working with Partners to Bring Back Wildlife and Natural Areas*

#### **Connecticut's Grassland Habitat Conservation Initiative**

An important aspect of Connecticut's wildlife conservation strategy aims to conserve rapidly disappearing grassland habitat. Connecticut grasslands provide nesting and breeding habitat for 80 bird species, including 13 on the state's endangered species list. Other wildlife include meadow jumping mice, smooth green snakes, and the threatened violet dart moth. The Grassland Habitat Conservation Initiative brings together a range of groups in support of proactive conservation including the Connecticut Farmland Trust, Audubon groups, academic institutions, municipal organizations, and many state and federal agencies. Their work ranges from land acquisition, land banking, and

management incentives to partnerships that help grassland conservationists work together. These wide-ranging and collaborative efforts will conserve wildlife and the grassland habitat upon which they depend for future generations.

### *Gathering Information to Take Action*

#### **Researching Connecticut's Native Bee Pollinators**

Connecticut's conservation strategy identifies the statewide assessment of bees as an urgent conservation action. Fruit growers and scientists alike are reporting rapid and serious declines in pollinators nationwide, affecting natural processes as well as agricultural production. Wild honeybee hives, common in Connecticut just two decades ago, have disappeared. Many eastern bee species are declining rapidly, including the once common bumblebee



Grassland habitat/Geoff Krugar, Connecticut Department of Environmental Protection, Wildlife Division

that is now rare. There is growing concern that many North American bumblebee species are sliding toward extinction. Efforts are underway to study existing native pollinator populations to help regional and national pollinator conservation efforts. Conserving these native bees will benefit wildlife as well as the multi-million dollar agricultural operations that are dependent on bee pollination.

***Protecting Imperiled Land, Water, and Wildlife***

**Conserving Migratory Fish in the Connecticut River**

Striped bass predation of river herring and other migratory fish is a major threat identified in Connecticut’s conservation strategy. Several actions address this threat, particularly studying the food habits of predators and adjusting management efforts accordingly. River herring have long been an important biological resource throughout the northeastern U.S., providing food, fertilizer, and bait. River herring are also important ecological links between fresh waters where they breed and the ocean where they live and mature. Over the last two decades, alewife and blueback herring populations have declined

drastically in Connecticut and elsewhere. Gaining a more complete understanding of the effects of striped bass on river herring populations in the Connecticut River will inform good management decisions. Altering the striped bass harvest may help more river herring complete their spawning runs and ultimately help restore their population levels for the benefit of future generations.

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**Wildlife Division, Connecticut Department of Environmental Protection**

79 Elm Street  
Hartford, CT 06106-5127  
<http://www.ct.gov/dep>



Trapping striped bass/Connecticut Department of Environmental Protection, Fisheries Division



Common eastern bumblebee/John Ascher, [www.discoverlife.org](http://www.discoverlife.org)

*Conserving native bees will benefit wildlife as well as the multi-million dollar agricultural operations that are dependent on bee pollination.*

*The Delaware Division of Fish and Wildlife's Landowner Incentive Program and the Delaware Chapter of The Nature Conservancy joined efforts for largest private reforestation project in Delaware's history.*

# Delaware Wildlife Action Plan

## From Vision to On-the-Ground Action

**D**elaware's wildlife action plan identifies over 450 species of greatest conservation need - many of them rare, some declining, others still common - and focuses on protecting the forests, streams, meadows, offshore waters, and wetlands that sustain them. The plan prescribes on-the-ground management actions for both public and private lands, strategies for enhancing partnerships and increasing public awareness, and steps to enhance the state's internal capacity to coordinate implementation.

### *Protecting Imperiled Land, Water, and Wildlife*

#### **Restoring Forest on Ponders Tract**

The Delaware Division of Fish and Wildlife's Landowner Incentive Program and the Delaware Chapter of The Nature Conservancy joined efforts for one of the largest private reforestation projects in Delaware's history. Restoration efforts on The Nature Conservancy's Ponders Tract were concentrated near wetlands and buffer areas, improving the surrounding watershed and habitat for aquatic life.

Approximately 30 acres of pine trees were cleared in 8 different locations and replanted in 36 habitat island sites with a diverse stand of native hardwood seedlings and young trees. Volunteers and The Nature Conservancy land stewards spent 384.5 hours planting 1,368 trees and shrubs. Priority wildlife already benefitting from these efforts include ovenbirds, black-and-white warblers, red-tailed hawks, bald eagles, slender marsh pink, and southern leopard frog. These proactive efforts will conserve these wildlife and vital natural areas for future generations.



Volunteers help restore Ponders Tract/Steven Billups

***Proactive Efforts that Benefit Wildlife and People***

## **Creating Delaware's First Birding Trail**

Delaware's wildlife action plan emphasizes increasing public awareness about the importance of the state's wealth of wildlife and its efforts to conserve them. Working together, the Delaware Department of Natural Resources and Environmental Control, Delaware Audubon, Delmarva Ornithological Society, and the U.S. Fish and Wildlife Service have created the first-ever Delaware Birding Trail. This effort will educate and encourage birdwatchers to enjoy the rich bird and habitat diversity Delaware offers. With 27 birding spots featured throughout the state, birdwatchers can experience the world renowned shorebird migration in spring and fall, the hawk migration and snow goose spectacle in fall and winter, as well as the colorful songbird migration in spring and summer. The Delaware Birding Trail will help conserve the wildlife and natural places that bring peace and relaxation to our busy lives.

***Working with Partners to Bring Back Wildlife and Natural Areas***

## **Creating Wetland Habitat with Private Landowner**

Increased public and private partnerships are a key component of Delaware's wildlife action plan. Margaret Walters, a private landowner, has enrolled her farm in Delaware's Landowner Incentive Program because she believes "it's better for wildlife than agriculture." Restoration efforts include the creation of several shallow wetlands and planting grasses around them to attract grassland and ground-nesting birds. These new wetlands provide important habitat for several species of greatest conservation need including red-shouldered hawks, glossy ibis, spotted sandpipers, and Cope's gray

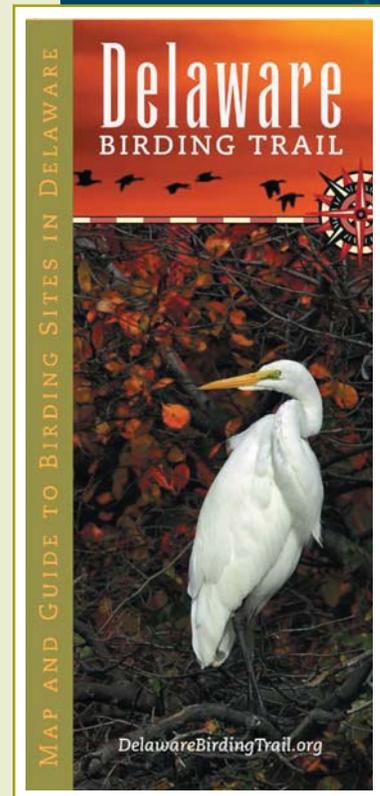
treefrogs. This proactive conservation by a private landowner will help conserve wildlife and the places they live before they become more rare and more costly to protect.

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### **Delaware Division of Fish and Wildlife**

89 Kings Highway  
Dover, DE 19901  
<http://www.dnrec.state.de.us/nhp/information/CWCS2.asp>



Delaware Birding Trail/Delaware Department of Natural Resources and Environmental Control



Wetlands created on private land/  
Delaware Division of Fish and Wildlife

*In spring 2007, the Fisheries and Wildlife Division hatched approximately one million American shad and placed them in the Anacostia River, a priority habitat in the wildlife action plan.*

# District of Columbia Wildlife Action Plan

## From Vision to On-the-Ground Action

Working with partners, the District of Columbia Fisheries and Wildlife Division identified species of greatest conservation need, their habitats and threats, and actions needed to conserve those species. Major challenges to wildlife in the District of Columbia are those that accompany rapid urbanization within a small area, such as air, water, and noise pollution, soil erosion, recreation, and habitat fragmentation. The District's primary challenge is the invasion of non-native species that change the character of the natural landscape.

### *Protecting Imperiled Land, Water, and Wildlife*

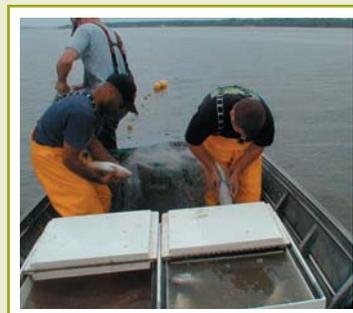
#### **Restoring Native Fish to the District's Waters**

Restoring healthy populations of priority wildlife to their natural habitats is an important goal in the District's wildlife action plan. The American shad is a freshwater fish species of greatest conservation need, its populations having severely declined due to overfishing and pollution of its habitat. In spring 2007, the Fisheries and Wildlife Division hatched approximately one million American shad and placed them in the Anacostia River, a priority habitat in the wildlife action plan. Approximately 70,000 hickory shad and 300,000 blue back herring, both priority species, were also stocked in Rock Creek. Maintaining robust populations of natural wildlife in the District's rivers means cleaner and healthier waters overall, ultimately benefiting people as well.

### *Proactive Efforts that Benefit Wildlife and People*

#### **Managing Non-native Canada Geese in Anacostia Park**

The District's wildlife action plan identifies non-native species as a high threat to rivers and tidal wetlands. The Anacostia River tidal basin currently supports a population of non-native, non-migratory Canada geese that have damaged existing wetlands through intense feeding and have seriously hampered efforts to restore the wetlands necessary to clean the Anacostia for both wildlife and people. The Fisheries & Wildlife and Watershed Protection Divisions have been major partners in the National Park Service's efforts to manage Canada geese within the Anacostia River. Toward that effort, District staff have restored native tidal marshes and monitored goose populations. Such efforts help conserve the natural places that the District's residents seek for peace and relaxation in their busy lives.



Gill netting American shad in the Potomac River/  
Joe Swann, District of Columbia Division of  
Fisheries and Wildlife

## ***Working with Partners to Bring Back Wildlife and Natural Places*** **Anacostia River Restoration Day**

Invasive species are identified as the greatest threat to wildlife in the District's wildlife action plan and the Anacostia River is one of the highest priority habitats. Hundreds of helping hands from local conservation partners and National Wildlife Federation affiliates from across the country gathered in March 2007 to participate in the largest restoration project ever on the shores of the Anacostia River. Around 300 volunteers from the public removed trash and invasive plants from the shore of the river, helping to improve the habitat for species of greatest conservation need, such as the sora and black-crowned night heron. Restoring the riverbank will make the river healthier overall, benefiting

people and wildlife, and ensure that future generations can enjoy this piece of nature in the urban city.

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### **District of Columbia Fisheries and Wildlife Division**

51 N Street, NE  
Washington, DC 20002  
<http://ddoe.dc.gov/ddoe/cwp/view,a,1210,q,494364,ddoeNav,|31007|,.asp>



Volunteers help green the banks of the Anacostia River/  
Julie Sibbing, National Wildlife Federation

*Hundreds of helping hands from across the country gathered in March 2007 to participate in the largest restoration project ever on the shores of the Anacostia River.*



Canada geese in the urban environment/Jon Siemien, District of Columbia Division of Fisheries and Wildlife

*Florida's proactive approach to prescribed burning helps prevent catastrophic wildfires that threaten habitat as well as homes and helps fulfill its responsibility to pass on these vital natural places to future generations.*

# Florida Wildlife Action Plan

## From Vision to On-the-Ground Action

**F**lorida's wildlife action plan identifies 974 animals and the actions needed to conserve them. A landscape approach categorizes the state into freshwater, saltwater and land systems totaling 45 habitat categories. By sustaining the health and integrity of these habitats, the broad array of wildlife and natural places within them are conserved for future generations.

### ***Proactive Efforts that Benefit Wildlife and People*** **Restoring Fire-Dependent Ecosystems**

Florida's wildlife action plan identifies prescribed burns as a priority because the decrease in natural fires imperils many plants and animals that depend on periodic fires for their reproduction, growth, and survival. Florida's Wildlife Legacy Initiative helps land managers meet prescribed burning goals by supporting two fire-based efforts. The Upland Ecosystem Restoration Project conducted prescribed burns on more than 10,000 acres of private land, and the Lake Wales Ridge Prescribed Fire Strike Team conducted prescribed burns on 17,600 acres on 24 natural areas.

This proactive approach to conservation helps Florida prevent catastrophic wildfires that threaten habitat as well as homes and helps fulfill its responsibility to pass on these vital natural places to future generations.

### ***Gathering Information to Take Action*** **Improving Knowledge about Aquatic Caddisflies**

The health of wildlife, particularly aquatic insects, is often an early indicator of disease and pollution that affects us all. Improving knowledge about invertebrate wildlife so that appropriate conservation measures can be taken is one of six top priorities in Florida's wildlife action plan. Caddisflies are aquatic insects that live



Prescribed fire/Tall Timbers Research Inc.

in streams and are species of greatest conservation need. To document caddisfly distribution and health, existing data are being compiled and field collections of caddisfly specimens are taking place at 108 sites in 39 out of 67 counties in Florida. With this improved knowledge, the Florida Fish and Wildlife Conservation Commission and all Floridians can take proactive action to identify and prevent pollution before it threatens other wildlife and people.

***Protecting Imperiled Land, Water, and Wildlife***

**Restoring Native Vegetation Vital to Migratory Birds**

Restoring native vegetation is an important aspect of Florida's wildlife action plan. Hurricane Charley provided Florida with a unique restoration opportunity in 2004 by blowing down thousands of non-native Australian pines. After the hurricane, the city of Sanibel re-established over 200 acres of diverse wildlife habitat at Bowman's Beach Park by completely removing the remaining non-native Australian pines and replanting the full range of native vegetation. Over 21,000 trees and shrubs of 70 native species were replanted, including strangler fig, gumbo limbo, and mahogany trees that provide exceptional food for migratory songbirds. This restoration project will allow citizens and tourists to experience the tens of thousands of warblers, vireos, orioles and tanagers that migrate through the area every spring and fall.



Caddisfly survey/Florida A&M University

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**Florida Fish and Wildlife Conservation Commission**

620 S. Meridian St.  
Tallahassee, FL 32399  
<http://myfwc.com/wildlifelegacy/>

*Over 21,000 trees and shrubs of 70 native species were replanted, including strangler fig, gumbo limbo, and mahogany trees that provide exceptional food for migratory songbirds.*



Restored vegetation at Bowman's Beach Park/City of Sanibel

# Georgia Wildlife Action Plan

## From Vision to On-the-Ground Action

**G**eorgia's wildlife action plan identifies 296 high priority animals and 323 high priority plants. High priority habitats and landscape features were also identified for five ecological regions of the state. Specific programs to address conservation needs for these species and habitats were identified and ranked. The necessary resources, partnerships, performance indicators and monitoring needs were also identified for each high priority conservation action.

### *Working with Partners to Bring Back Wildlife and Natural Areas*

#### **Restoring Bog Turtles and Wetlands**

Georgia's wildlife action plan identifies conservation of bog turtles and other rare wildlife dependent on mountain wetlands as a high priority. The federally threatened bog turtle is possibly the state's rarest reptile, and very few high quality mountain bogs remain. In response, the Georgia Mountain Bog Enhancement Project is restoring wetlands and a Bog Turtle Headstart program is gathering eggs from wild turtles, raising the hatchlings and releasing them into restored habitat. Seventeen captive-reared bog turtles have been released. Rare plants including montane purple pitcher plants and federally endangered swamp pink plants have also been

planted at a restored mountain bog in the Chattahoochee National Forest. Further efforts will help private landowners conserve these important wetlands in the Blue Ridge Mountains, maintaining water quality and providing habitat for imperiled wildlife like the bog turtle.

### *Proactive Efforts that Benefit Wildlife and People*

#### **Improving Habitat for Imperiled Wildlife**

Habitat restoration and management on public lands are important priorities in Georgia's wildlife action plan. Imperiled wildlife are benefiting from more than 16,750 acres of prescribed burning since 2004 and from habitat restoration programs on state parks, natural areas and wildlife management areas. The Wildlife Resources Division

*The Georgia Mountain Bog Enhancement Project is restoring wetlands and a Bog Turtle Headstart program is gathering eggs from wild turtles, raising the hatchlings and releasing them into restored habitat.*



Restoring a mountain bog in the Chattahoochee National Forest/Georgia Department of Natural Resources



A prescribed burn/Georgia Department of Natural Resources

has provided wildland fire training to more than 325 Department of Natural Resources staff members and AmeriCorps volunteers, implementing the wildlife action plan goal of supporting fire programs that restore and maintain fire-dependent ecosystems. The impact of other management methods, such as thinning timber and planting longleaf pines and wiregrass, are being assessed to document habitat changes and shape future management programs. This proactive management will conserve wildlife and vital natural areas for future generations.

***Protecting Imperiled Land, Water, and Wildlife***

**Restoring and Conserving Sandhill Habitat**

Georgia's sandhill habitats harbor rare wildlife, but many of the habitats have been degraded and few acres are protected under state ownership. Using State Wildlife Grants and private funds, the Georgia Department of Natural Resources acquired 844 acres of former timber company property to create the Fall Line Sandhills Natural Area. The Wildlife Resources Division will restore the property for high priority wildlife such as the gopher tortoise, gopher frog, Bachman's sparrow, southeastern kestrel and striped newt. Imperiled plants that

will benefit include Pickering's morning-glory, pondberry, sandhills golden-aster and lax water-milfoil. In addition, gopher frog eggs collected here will be used to restore populations at other protected sites. Such efforts will help conserve these wildlife before they become more rare and costly to protect.

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*Imperiled wildlife are benefiting from more than 16,750 acres of prescribed burning since 2004 and from habitat restoration programs on state parks, natural areas and wildlife management areas.*



Gopher frog/Georgia Department of Natural Resources

# Hawaii Wildlife Action Plan

## From Vision to On-the-Ground Action

**F**rom the beginning, Hawaii's wildlife action plan was a collaborative effort involving partners such as government agencies (federal, state, county), nonprofit organizations, universities, private landowners, scientists, community members, hunters and anglers, wildlife recreationists, Native Hawaiians, and the public. This approach to planning and implementation recognizes that conserving and protecting Hawaii's unique native wildlife and habitats for future generations is everyone's responsibility, duty, and honor.

### *Working with Partners to Bring Back Wildlife and Natural Areas* **Restoring Montane Forests on the Hawaiian Islands**

Hawaii's wildlife action plan identifies the restoration and protection of native dry forests as a priority goal. Invasions of non-native weeds pose major threats to forests because they lead to more frequent and intense wildfires that can eventually destroy the forest. Without protection and management, these habitats remain vulnerable. This project is restoring three forest habitats that support hundreds of native threatened and endangered plants and animals. Restoration includes fencing imperiled habitat, restoring native plants, and removing feral pigs and sheep that destroy habitat. Areas that benefit include 5,000 acres near Mauna Kea forest reserve, the 3,800-acre Puu waawaa Forest Bird Sanctuary, and more than 40,000 acres of public and private land in the Leeward Haleakala watershed. These proactive efforts begin a long-

term recovery effort that will conserve wildlife and vital natural areas for future generations.

### *Proactive Efforts that Benefit Wildlife and People* **Managing and Conserving a Kipuka Rainforest**

Another priority goal in Hawaii's wildlife action plan is public education and involvement in wildlife conservation. A project in the kipuka rainforest aims to provide safe and convenient public access to a kipuka rainforest, giving residents and visitors a rare opportunity to experience one of Hawaii's most spectacular ecosystems. Kipukas are pockets of ancient forest that have been surrounded by relatively recent lava flows, but left intact and unharmed. Restoration work includes the release of 12 endangered Hawaii akepa and six endangered Hawaii creepers. A new fence around the kipuka helps keep destructive feral pigs and sheep out. Dozens of volunteer trips have involved the community and school children in the

*This project is restoring three forest habitats that support hundreds of native threatened and endangered plants and animals.*



A palila, one species to benefit from dry forest restoration/Jack Jeffrey



Ohia lehua plant protected in the kipuka/Hawaii Division of Forestry and Wildlife

kipuka project. Conserving Hawaii's wildlife and vital natural areas enhances the quality of life for all Hawaiians.

**Protecting Imperiled Land, Water, and Wildlife**

**Conserving the Puaiohi (Small Kauai Thrush)**

Managing and restoring native wildlife and habitats so that native species can thrive is a high priority in Hawaii's wildlife action plan. The puaiohi, or small Kauai thrush, is an extremely rare bird found only in Kauai. However, the number of surviving individuals suggests good chances for recovery. The Zoological Society of San Diego launched a successful captive breeding program to establish new breeding populations in unoccupied habitat and increase existing populations. Between 1999 and 2007, 155 captive-reared puaiohis were released into the Alakai Wilderness Preserve. Survival of the most recently released birds has been excellent. In addition, an intensive study began in 2007 to better understand the

bird's recovery needs and to develop the most cost-effective strategies for long-term recovery. Such efforts will restore and conserve the puaiohi for future generations.

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Hawaii akepa, a honeycreeper found only in Hawaii/Jack Jeffrey



Puaiohi chicks/Zoological Society of San Diego

*A project in the kipuka rainforest aims to provide safe and convenient public access to a kipuka rainforest, giving residents and visitors a rare opportunity to experience one of Hawaii's most spectacular ecosystems.*

*Many state, federal, and local partners are working together to restore Yellowstone cutthroat trout and habitat in Teton Creek. Healthy native fish populations are important to many of our family traditions and clean water benefits the health of wildlife and people.*

# Idaho Comprehensive Wildlife Conservation Strategy

## From Vision to On-the-Ground Action

Idaho's Wildlife Strategy takes an ecologically-based approach to planning, organizing landscapes by geographic regions, called ecological sections, with similar species, habitats, and conservation needs. This section-level approach is combined with a fine-scale approach of identifying species-level issues and conservation needs for 229 species. The strategy promotes proactive conservation actions to ensure cost-effective solutions instead of reactive measures enacted in the face of imminent losses.

### ***Working with Partners to Bring Back Wildlife and Natural Areas*** **Restoring Yellowstone Cutthroat Trout to Teton Creek**

Priority conservation issues in Idaho's Comprehensive Wildlife Conservation Strategy include habitat loss and the resulting population declines in Yellowstone cutthroat trout populations. Many state, federal, and local partners are working together to implement a restoration project in Teton Creek that will improve habitat and increase trout numbers. Restoring stream flows, stabilizing stream banks, constructing fish habitat, and planting riparian vegetation will make the water cleaner and colder, which Yellowstone cutthroat trout prefer.

Healthy native fish populations are important to many of our family traditions and restoring clean water will benefit the health of wildlife and people.

### ***Gathering Information to Take Action*** **Obtaining Better Information on Small Mammals in the City of Rocks**

Idaho's wildlife conservation strategy prioritizes gaining better knowledge of native species and the habitats they depend upon in order to make crucial management decisions. City of Rocks National Reserve is home to several rare mammal species not found anywhere else in Idaho. Pinyon-juniper woodlands in City of Rocks National Reserve and Castle



Teton Creek/Mike Lien

Rocks State Park were surveyed in 2005 and 2006, providing new information on the distribution, abundance and habitat preferences of the cliff chipmunk, pinyon mouse, canyon mouse, brush mouse, and ringtail. This vital information will help Idaho in making cost-effective decisions to conserve these mammals before they become more rare and costly to protect.

### *Proactive Efforts that Benefit Wildlife and People*

## **Improving Sage Grouse Habitat**

Idaho's strategy for conservation of sage grouse, a priority species, includes protecting and maintaining sagebrush habitat, reducing sagebrush fragmentation, and reducing human disturbance. It is not uncommon to see 2,000 to 3,000 sage grouse in the Upper Snake River area during fall and winter, but they are threatened by collision mortalities and the interruption of migration corridors due to aboveground power lines. Cooperation between the Idaho Department of Fish and Game, Rocky Mountain Power, Clark Soil Conservation District, and the Bureau of Land Management resulted in the burial of 4.7 miles of proposed power line and

the removal of 10 miles of existing power line, improving habitat and reducing mortality hazards for sage grouse in the area. Such efforts benefit vital habitat, helping to conserve the sage grouse for the enjoyment of future generations.

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Sage grouse/Idaho Department of Fish and Game

*Cooperation between the Idaho Department of Fish and Game, Rocky Mountain Power, Clark Soil Conservation District, and the Bureau of Land Management resulted in the burial of 4.7 miles of proposed power line and the removal of 10 miles of existing power line, improving habitat and reducing mortality hazards for sage grouse.*



City of Rocks/Jodi Vincent



Mammal trapping/Jodi Vincent

# Illinois Wildlife Action Plan

## From Vision to On-the-Ground Action

Illinois' wildlife action plan gives an overview of the major habitat types in the state, their current condition, challenges to their integrity, and actions to conserve them. The 15 ecological regions of Illinois focus on key natural communities and wildlife, places with special importance for conserving wildlife, and opportunities for outdoor recreation. Illinois' wildlife action plan outlines seven campaigns: Farmland and Prairies, Forests, Wetlands, Streams, Invasive Species, Land and Water Stewardship, and Green Cities.

### *Protecting Imperiled Land, Water and Wildlife*

### **Restoring Water and Wildlife to Hennepin and Hopper Lakes**

Wetland conservation is one of seven campaigns in Illinois' wildlife action plan. For 150 years, Hennepin and Hopper Lakes' water was pumped out, farmers grew crops on the land, and waterbirds were nowhere to be seen. To restore these once-vibrant wetlands, The Wetland Initiative acquired the land in 2001 and immediately turned

off the pumps. Within weeks, the water and the birds were back. By fall, water flowed over nearly 1,000 acres. Native plants reappeared, including the state-endangered yellow monkey-flower that has not been seen in the area for at least two decades. Today more than 235 bird species can be seen, including the state-threatened pied-billed grebe, bald eagle, and black tern. Projects like this are cost-effective ways to improve water quality, increase habitat and wildlife diversity, reduce flood peaks and flood damages, and create opportunities for recreation and economic development.

*Thanks to a wetland restoration project on Hennepin and Hopper Lakes, more than 235 bird species can be seen today, including the state-threatened pied-billed grebe, bald eagle, and black tern.*



Hennepin and Hopper corn field before restoration/  
Gary Sullivan, The Wetlands Initiative



Hennepin and Hopper Lakes after restoration/Gary Sullivan, The Wetlands Initiative

## ***Working with Partners to Bring Back Wildlife and Natural Areas*** **Conserving Grassland Wildlife**

Illinois' wildlife action plan lays out many priorities for grassland wildlife in its "Farmland and Prairie" campaign. The lack of high quality grassland habitat has led to declining levels of many grassland wildlife populations. To carry out grassland conservation actions, the Illinois Department of Natural Resources has partnered with The Nature Conservancy, Illinois Audubon Society, Quail Unlimited, Pheasants Forever, National Wild Turkey Federation, and University of Illinois – Champaign/Urbana. Over the next 25 years, this initiative will establish 50,000 acres of additional grassland, improve 100,000 acres of existing grassland, and restore or create 2,500 acres of wetlands in grassland. Wildlife to benefit include greater prairie chicken, bobolink, eastern meadowlark, and state endangered upland sandpipers. These collaborative efforts will conserve grassland wildlife and their vital habitat for future generations.



Grassland habitat/Illinois Dept. of Natural Resources

and Wildlife Service launched Illinois' first project through the National Fish Passage Program. Two fish passages were constructed that reconnect 70 miles of stream habitat, providing healthier habitat for fish and mussels. Since installation, 12 different fish species have used the passages to bypass the dams and expand into more habitat. These restoration methods will serve as models for future efforts to restore fragmented stream habitat. Such proactive efforts to conserve fish and their stream habitat protect our clean water, benefiting both wildlife and people.

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### ***Proactive Efforts that Benefit Wildlife and People***

## **Restoring Fish Passages on Big Rock Creek**

Stream restoration and conservation are high priorities in Illinois' wildlife action plan. Two dams on Big Rock Creek block fish movement. Species affected include greater redhorse, channel catfish, mottled sculpin, and several migratory sucker fish. To help these priority fish without removing the dams, U.S. Fish

***Two fish passages were constructed that reconnect 70 miles of stream habitat, providing healthier habitat for fish and mussels.***



Migratory shorthead redhorse spawning in Big Rock Creek/Stephen M. Pescitelli, Illinois Department of Natural Resources

# Indiana Comprehensive Wildlife Strategy

## From Vision to On-the-Ground Action

*Early identification of threats to fish, wildlife and their habitats contributes to the goals of Indiana's Comprehensive Wildlife Strategy by providing an opportunity to prevent species from becoming endangered.*

Since habitat loss is the biggest threat to Indiana wildlife, the Indiana Department of Fish and Wildlife considered a habitat-based approach to wildlife conservation the most efficient way to address the needs of the widest variety of species. Experts strongly support protecting migration routes and managing populations of common species as methods for conserving wildlife populations.

### *Proactive Efforts that Benefit Wildlife and People* **Improving Management of Birds Breeding in Indiana**

Early identification of threats to fish, wildlife and their habitats contributes to the goals of Indiana's Comprehensive Wildlife Strategy by providing an opportunity to prevent species

from becoming endangered. Observations of birds carrying nest material, singing from the same place for more than a week, courting a female, or chasing rival males help determine whether bird species are breeding in the state and where they are breeding. In 2007, biologists and volunteers completed

the third of six field seasons necessary to map the current distribution of breeding birds in Indiana. Gathering this important information will allow Indiana to make smart, proactive management decisions to conserve its diverse array of birds for future generations to enjoy.

### *Gathering Information to Take Action* **Researching Causes of Eastern Box Turtle Decline**

Indiana's wildlife strategy has prioritized identifying threats to Indiana's wildlife and conducting research that will help to understand these factors and how to address them. Populations of eastern box turtles have declined across their entire range in recent years. Road mortality, habitat fragmentation, and collection are all problems, leading Indiana to prohibit the collection of wild box turtles within the state. To investigate threats to the box turtle, biologists are using radio-tracking methods to collect information on box turtle home ranges and movement patterns throughout spring, summer, and fall. Transmitters left on turtles during the winter provide information on the condition of hibernating turtles. As Indiana communities grow, these research efforts will help us fulfill our responsibility to conserve the eastern box turtle and the places it lives for future generations.



Black-crowned night heron in nest/  
Indiana Department of Natural Resources



Eastern box turtle with radio transmitter attached/Indiana Department of Natural Resources

## ***Working with Partners to Bring Back Wildlife and Natural Areas Restoring Allegheny Woodrats in Indiana***

Identifying and addressing negative impacts to priority species, such as the Allegheny woodrat, is a key component of Indiana's wildlife strategy. The Allegheny woodrat has a peculiar habit of collecting items like twigs, bone, seeds, pencils, and snail shells into large caches called middens. The decline of this state-endangered species is likely due to habitat fragmentation, reduced genetic diversity, and a fatal parasite. The Wildlife Diversity Section has partnered with Purdue University and The Nature Conservancy to experimentally release woodrats obtained from non-threatened populations elsewhere in its range and to research the parasite's effects on woodrat populations. Future trapping of woodrats will provide information on

their habitat and where they live. These research efforts will provide Indiana with the necessary information to conserve the Allegheny woodrat and the habitat it needs for survival.

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endangered/](http://www.in.gov/dnr/fishwild/endangered/)



Allegheny woodrat/Indiana Department of Natural Resources

*As Indiana communities grow, these research efforts will help us fulfill our responsibility to conserve the eastern box turtle and the places it lives for future generations.*

*In a historic effort, the Iowa Department of Natural Resources and several partners have created the first-ever Amphibian and Reptile Conservation Area across the 470,000-acre Mississippi River floodplain in southeastern Iowa.*

# Iowa Wildlife Action Plan

## From Vision to On-the-Ground Action

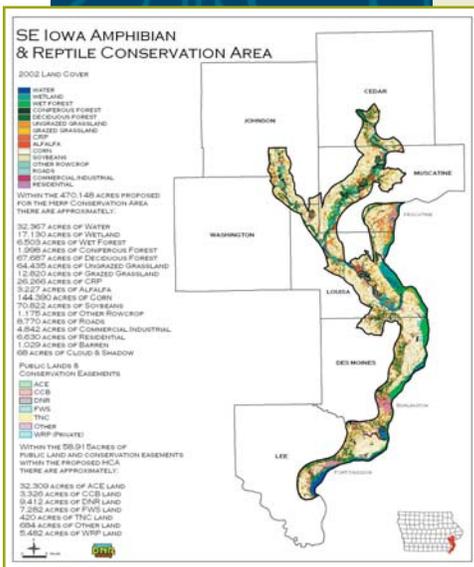
Iowa’s wildlife action plan constitutes the first-ever attempt at accounting and planning for the entire range of the state’s wildlife—birds, fish, mammals, reptiles and amphibians, butterflies, freshwater mussels and other creatures. Aiming to keep common species common, the wildlife action plan presents six visions for the future of Iowa’s wildlife, with goals and multiple management strategies for each. With a habitat-based approach, Iowa’s plan focuses on meeting the needs of 296 species of greatest conservation need.

### *Protecting Imperiled Land, Water, and Wildlife*

## Creating the Nation’s First-ever Amphibian and Reptile Conservation Area

Restoring declining wildlife and increasing the state’s conservation lands are key visions of Iowa’s wildlife action plan. Charismatic mammals receive a lot of public sympathy and there is a long list of conservation areas set aside just for birds. Amphibians and reptiles are frequently overlooked, yet are often the wildlife most at risk – including in Iowa,

where many amphibians and reptiles are on the state’s threatened and endangered list. However, the Mississippi River floodplain in southeast Iowa is still home to enough species to be considered a diversity hotspot. In a historic effort, the Iowa Department of Natural Resources and several partners have created the first-ever Amphibian and Reptile Conservation Area across this 470,000-acre floodplain landscape. This area will protect critical habitat for such diverse species as the eastern massasauga, yellow mud turtle, pickerel frog and central newt before they become more rare and costly to protect.



Amphibian and reptile habitat/Doug Harr, Iowa Department of Natural Resources



Setting a track plate to record the presence of passing mammals/Mike Sweet, US Fish and Wildlife Service

### **Gathering Information to Take Action** **Establishing the First** **Statewide Inventory and** **Monitoring System**

The lack of data on Iowa's lesser-known fish and wildlife has hindered previous management efforts, so an important goal of Iowa's wildlife action plan is to establish a systematic method for monitoring wildlife over the long term. In response, the Iowa Department of Natural Resources is carrying out the first comprehensive effort to inventory all of Iowa's wildlife based on U.S. Forest Service methods. Over the next five years, information on all wildlife and associated habitat will be gathered and catalogued at 304 permanent sites, located chiefly on public or permanently protected lands. Each site will be revisited every five years to document any changes in species or habitats, which will assist in making good, cost-effective management decisions over the long term.

### **Proactive Efforts that Benefit** **Wildlife and People** **Restoring Iowa's** **Native Prairies**

Investments in the Iowa Wildlife Action Plan have improved Iowa's ability to restore native prairie landscapes that are so important to Iowa's wildlife. Shortages of plant material, expertise, and the ability to plan on a landscape scale hampered Iowa's efforts in the past. With the creation of the Iowa DNR's Prairie Seed Resources Unit, a Wildlife Habitat Specialist now works with individual wildlife managers to help select proper seed mixes based upon soil type

and other factors unique to each restoration site. Now, thousands of acres are restored annually. These habitat improvements should provide huge benefits to declining grassland wildlife species of greatest conservation need, helping to conserve them for future generations.

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*Investments in the Iowa Wildlife Action Plan have improved Iowa's ability to restore native prairie landscapes that are so important to Iowa's wildlife.*



A prairie seed production field/Doug Harr, Iowa Department of Natural Resources

# Kansas Wildlife Action Plan

## From Vision to On-the-Ground Action

Several broad themes emerged while developing Kansas' wildlife action plan: existing data gaps impede effective conservation planning and implementation, land management practices have changed the structure of habitats over large areas, fragmentation and conversion of habitat is occurring, invasive non-native plants and animals are a problem, natural resource management may affect habitat conditions, and there is inadequate coordination between government agencies for resource management. Kansas' 315 species of greatest conservation need were associated with habitats within three conservation regions.

*As Kansas communities grow, these proactive approaches will conserve wildlife and vital natural areas before they become more rare and more costly to protect.*

### **Protecting Imperiled Land, Water, and Wildlife**

#### **Conserving Natural Areas**

To keep common species common, Kansas' wildlife action plan seeks improved information on the health of important wildlife habitat. A State Wildlife Grants funded study identified the remaining high-quality natural areas

and rare wildlife in a five-county area of northeast Kansas. This region is developing rapidly, creating many challenges for wildlife conservation. Each of these high-quality natural areas can sustain several priority species such as red-shouldered hawks, broad-winged hawks, regal fritillary butterflies, and red-eyed vireos.

The Kansas Department of Wildlife and Parks uses this information to help guide planning commissions and development to conserve as many high quality natural areas as possible. This successful regional

inventory prompted similar efforts in other counties. As Kansas communities grow, these proactive approaches will conserve wildlife and vital natural areas before they become more rare and more costly to protect.

### **Gathering Information to Take Action**

#### **Kansas Mammals Status**

Of the 75 mammal species in Kansas, 17 are species of greatest conservation need in the wildlife action plan. Following a highly successful and informative documentation of Kansas' amphibians and reptiles, a similar effort was undertaken for mammals. A thorough update of mammal information has not occurred in Kansas for over three decades so this effort will efficiently direct new conservation efforts and will serve as the baseline for long-term monitoring of mammals of Kansas. All information will be available online to biologists, citizens, and other conservationists. Sound data on Kansas mammals will allow the most



Hikers in Kansas' Konza prairie/Mike Blair



Bat cave/Ken Brunson, Kansas Department of Wildlife and Parks

effective conservation efforts to be taken, conserving wildlife and the places they live for future generations.

***Protecting Imperiled Land, Water, and Wildlife***

**Stream Monitoring and Assessment Program**

A top statewide priority in Kansas's wildlife action plan is obtaining vital information on wildlife that is not hunted or fished. Since 2003, State Wildlife Grants have supported the Kansas statewide stream survey. This long-term effort to assess aquatic life in Kansas will provide necessary guidance for conservation of imperiled aquatic wildlife. Over 1300 assessments have been completed, providing many agencies and conservation organizations with important species information. The data provides additional information

about all fish species and helps document the spread of aquatic nuisance species and pollution. Having good information on Kansas stream wildlife will help prevent costly endangered species listings, benefiting wildlife and people.

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Stream survey/Shawn Hume, Kansas Department of Wildlife and Parks

*Since 2003, State Wildlife Grants have supported the Kansas statewide stream survey. This long-term effort to assess aquatic life in Kansas will provide necessary guidance for conservation of imperiled aquatic wildlife.*

# Kentucky Wildlife Action Plan

## From Vision to On-the-Ground Action

**K**entucky's wildlife action plan identifies priority conservation actions for terrestrial and aquatic wildlife and the places they live. Important strategies include protecting habitat through acquisition, easements, or economic incentives with private landowners, and partnerships with other state and federal agencies and conservation organizations.

### *Proactive Efforts that Benefit Wildlife and People*

#### **Learning More About Black Bears in Kentucky**

Black bears are high priority wildlife in Kentucky's wildlife action plan. A cooperative project between the Kentucky Department of Fish and Wildlife Resources, Indiana University of Pennsylvania, and University of Kentucky aims to determine the size and distribution

of Kentucky's black bear population. This project will provide the first formal population estimate for black bears in the Commonwealth and illuminate recolonization patterns from the past 20 years. This research will be invaluable to current and future management efforts as bears continue to expand throughout once unoccupied habitat. This proactive effort will conserve bears for future generations and best manage their potential interactions with people.

*Kentucky's proactive research efforts will conserve bears for future generations and best manage their potential interactions with people.*



Black bear/Steven Dobby



Pink mucket mussels/Kentucky Department of Fish and Wildlife Resources

### ***Protecting Imperiled Land, Water, and Wildlife*** **Restoring Endangered Pink Mucket Mussels**

Conservation of the endangered pink mucket mussel is a priority in Kentucky's wildlife action plan. Pink mucket populations have declined throughout their range since being listed as endangered in 1976. Kentucky Department of Fish and Wildlife Resources reared pink mucket mussels at the Center for Mollusk Conservation and released 1,100 pink muckets in Green River in July 2007. This was the first effort to recover pink muckets in the state. The work also developed the best methods and techniques to recover mussel populations. Restoration efforts will continue for the next several years to augment existing populations of pink muckets and other endangered mussels. Maintaining healthy populations of mussels means cleaner waters that benefit both wildlife and people.

### ***Gathering Information to Take Action*** **Improving Kentucky Wildlife and Heritage Information**

Kentucky's wildlife action plan prioritizes obtaining and organizing good information since good decisions that benefit both wildlife and people cannot be made without it. State Wildlife Grant funds continue to help Kentucky obtain and organize

important wildlife information by combining the Kentucky Fish and Wildlife Information System with the Kentucky Heritage Database. Data sharing helps biologists refine locations of key wildlife and habitat areas, leading to more proactive and cost effective management practices. This continued collaboration helps improve the quality and availability of information for the many partners working together to conserve wildlife for future generations.

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***Kentucky Department of Fish and Wildlife Resources reared pink mucket mussels at the Center for Mollusk Conservation and released 1,100 pink muckets in Green River in July 2007.***



Cape May Warbler/John Brunjes, KDFWR

# Louisiana Wildlife Action Plan

## From Vision to On-the-Ground Action

Louisiana's wildlife action plan is a habitat-based approach to conserving rare and declining wildlife species, focusing on habitats such as open water marine environments, riverine systems, and 38 terrestrial habitats, including agricultural-crop-grasslands. A variety of partners developed conservation actions for these landscape features on a regional basis. The wildlife action plan also identifies conservation priorities for 240 rare or declining wildlife species.

*This proactive effort will help Louisiana implement forest management practices that maximize the habitat quality for resident and migratory birds while still allowing a sustainable timber harvest.*

### *Protecting Imperiled Land, Water, and Wildlife*

#### **Managing Diverse Bird Communities**

Improving multi-species habitat management practices is a high priority in Louisiana's wildlife action plan.

The Louisiana Division of Wildlife and Fisheries is conducting a ten-year bird study to evaluate the impacts of natural area designations and forestry practices on birds in the Sherburne Wildlife Management Area. Over thirty resident and migratory bird species of conservation concern inhabit this bottomland hardwood forest area. Information gathered will complement other

research efforts on bird reproduction and survival. This proactive effort will help Louisiana implement forest management practices that maximize the habitat quality for resident and migratory birds while still allowing a sustainable timber harvest.

### *Gathering Information to Take Action*

#### **Understanding Amphibian Diversity and Distribution**

Fish and wildlife inventories are performance indicators for wildlife conservation in Louisiana's wildlife action plan. A comprehensive inventory of the amphibians and reptiles inhabiting the Loggy Bayou, Bayou Pierre, and Jackson-Bienville Wildlife Management Areas was completed by a researcher from Louisiana State University

–Shreveport using State Wildlife Grants. Important recommendations for improving amphibian and reptile research also resulted.

The Louisiana Department of Wildlife and

Fisheries will use this valuable information to cost-effectively manage its lands for amphibians, reptiles, and other wildlife before they become rare and costly to protect.



Hooded warbler/Louisiana Division of Wildlife and Fisheries



Successfully trapped alligator snapping turtle/Louisiana Department of Wildlife and Fisheries

## ***Working with Partners to Bring Back Wildlife and Natural Areas*** **Engaging Private Landowners in Land Conservation**

One wildlife action plan goal is to ensure that each wildlife species or habitat of conservation concern in Louisiana is adequately represented in the Louisiana Natural Areas Registry. Louisiana is home to a rich and beautiful natural heritage of river basin swamps, marshes, chenier woodlands, pine savannahs, and prairies. The Registry was created to conserve the best remaining examples of Louisiana's natural heritage and relies upon citizen-based conservation and the willingness of landowners to safeguard biological diversity on their lands. To date, over 100 landowners have voluntarily registered more than 45,000 acres representing 25 natural communities. This community-

based effort to protect habitat also conserves the rare plants and animals that depend upon these natural areas.

### **Association of Fish & Wildlife Agencies**

444 North Capitol St, NW  
Suite 725  
Washington, DC 20001  
202.624.7890  
[www.teaming.com](http://www.teaming.com)  
[www.wildlifeactionplans.org](http://www.wildlifeactionplans.org)

### **Louisiana Department of Wildlife and Fisheries**

2000 Quail Drive  
Baton Rouge, LA 70808  
<http://www.wlf.state.la.us/experience/wildlifeactionplan/>



Restored prairie site in north Louisiana/Louisiana  
Division of Wildlife and Fisheries

*The Natural Areas Registry was created to conserve the best remaining examples of Louisiana's natural heritage and relies upon citizen-based conservation and the willingness of landowners to safeguard biological diversity on their lands.*



Survey efforts for amphibian and reptiles/Louisiana Division of Wildlife and Fisheries

# Maine Wildlife Action Plan

## From Vision to On-the-Ground Action

**M**aine's wildlife action plan addresses the full array of fish and wildlife and their habitats across the state, targeting species in greatest need of conservation while keeping common species common. It builds on a species planning effort that has been ongoing for nearly 40 years, a landscape approach to habitat conservation – Beginning with Habitat – that was initiated in 2000, and a long history of public involvement and collaboration among conservation partners.

### *Working with Partners to Bring Back Wildlife and Natural Areas*

#### **Restoring Seabirds to Eastern Brothers Island**

Increasing the number and distribution of tern, puffin, and razorbill seabird colonies along the Maine coast is an important goal in Maine's wildlife action plan. The Maine Department of Inland Fisheries and Wildlife worked with the Maine Coastal Islands National Wildlife Refuge to restore Eastern Brothers Island in 2007. Efforts included setting up 128 tern, Atlantic puffin, and razorbill decoys to attract birds, conducting a

prescribed burn, and setting up a system to continuously play tern colony sounds. Regular sightings of razorbills and a breeding pair of common terns in 2007 indicate Eastern Brothers Island will soon become a productive colony, conserving these birds before they become more rare and costly to protect.

### *Gathering Information to Take Action*

#### **Conserving the Endangered Black Racer**

The northern black racer is state endangered and a species of greatest conservation need in Maine's wildlife

*Regular sightings of razorbills and a breeding pair of common terns indicate Eastern Brothers Island will soon become a productive seabird colony, conserving these birds before they become more rare and costly to protect.*



Razorbill decoys/US Fish and Wildlife Service

action plan. Large but rarely encountered snakes, black racers require large habitat blocks of pine-oak forests, pine barrens,

100 years from now. The intent of this program is not to stop growth so vital to Maine's economy, but to do growth better. Most towns now use *Beginning with Habitat* as the starting point for developing local conservation priorities and to strategically evaluate local land use opportunities. As Maine's communities grow, this program will help conserve wildlife and vital natural places for future generations.

*Most towns now use **Beginning with Habitat** as the starting point for developing local conservation priorities and to strategically evaluate local land use.*



Black racer/Maine Department of Inland Fisheries and Wildlife

heath-lands, or reverted farmland. In Maine, racers are limited to the southern third of the state and could be lost entirely due to their low numbers and habitat loss and fragmentation. A radio tracking study by the Maine Department of Inland Fisheries and Wildlife will provide better information on black racer habitat use, space requirements, and behavior in dens. This research will help efficiently and effectively conserve the black racer and the habitat it relies upon.

### ***Protecting Imperiled Land, Water, and Wildlife***

## **Beginning with Habitat**

Maine's wildlife action plan was built upon *Beginning with Habitat*, a cooperative effort of agencies and organizations to help towns address local habitat needs and concerns by providing wildlife and habitat information and technical assistance. On their own, few towns have the capacity or expertise to know how their decisions today will affect plants and animals available

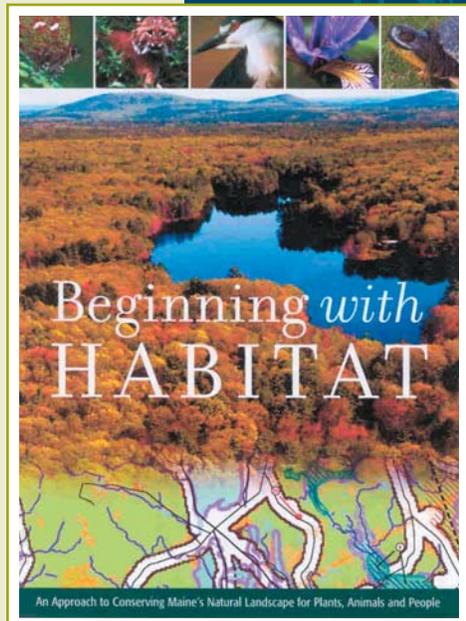
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### **Maine Department of Inland Fisheries and Wildlife**

41 State House Station, 284 State Street  
Augusta, ME 04333-0041  
[http://www.maine.gov/ifw/wildlife/groups\\_programs/comprehensive\\_strategy/index.htm](http://www.maine.gov/ifw/wildlife/groups_programs/comprehensive_strategy/index.htm)



Beginning with Habitat/  
Maine Department of Inland  
Fisheries and Wildlife

*The Maryland Department of Natural Resources has removed trees and shrubs to restore wetland habitat for bog turtles at 10 sites, proactively conserving the bog turtle and natural areas for future generations.*

# Maryland Wildlife Action Plan

## From Vision to On-the-Ground Action

**M**aryland's wildlife action plan reviews the status and conservation needs of 502 imperiled wildlife species and groups those needs into 35 key wildlife habitats, such as Carolina bays, tidal marshes, grasslands, and old growth forests. Threats and conservation actions, as well as inventory, research and monitoring needs, are recommended for each of the key wildlife habitats. Since both species and habitat-based needs have been considered, Maryland's wildlife action plan will help guide the conservation of all wildlife species.

### *Proactive Efforts that Benefit Wildlife and People*

#### **Restoring Habitat for Threatened Bog Turtles**

The threatened bog turtle lives in bog and fen wetlands, which are key wildlife habitats in Maryland's wildlife action plan. Maryland supports a significant portion of the northern bog turtle population. Most of the bog turtle habitat occurs within a rapidly developing area of the state and these wetlands are subject to numerous threats, including invasion by woody vegetation. In collaboration with the U.S. Fish and Wildlife Service and Environmental Defense, the Maryland Department of Natural Resources has removed trees and shrubs to restore wetland habitat at 10 sites and is monitoring how well the bog turtles respond to these management efforts. Such proactive efforts will help conserve the bog turtle and natural areas upon which it depends for future generations.



Bog turtle/Maryland Department of Natural Resources

### *Gathering Information to Take Action*

#### **Conserving Old Growth Forests**

Old growth forests are key wildlife habitat in Maryland's wildlife action plan. Conserving them is critical since old growth forests take hundreds of years to grow. Maryland's landscape used to be primarily old growth forest, but most has since been logged or converted to other land uses. Recent surveys revealed that over 2,300 acres of old growth forest remain on 40 sites, located mostly on state-owned land in western Maryland. The Big Savage and South Savage Wildlands of Savage River State Forest contain more than 770 acres of old growth forest. Guidelines for the conservation of old growth forests were also developed, which will help Maryland conserve these important forests before they become more rare and costly to protect.

***Working with Partners to Bring Back  
Wildlife and Natural Areas  
Conserving Important  
Bird Areas***

Identifying and conserving the areas essential for sustaining native birds are vital since more than a quarter of Maryland's 500 species of greatest conservation need are birds. Conservation efforts focused on birds will also benefit many other wildlife species. As part of an international effort, The Maryland Department of Natural Resources has partnered with the National Audubon Society and the birding community to identify Important Bird Areas in the state. An Important Bird Area provides essential habitat for vulnerable birds, including nesting areas, migration resting sites, and wintering grounds. To date, 20 Important Bird Areas have been designated in

Maryland, which will help make good management decisions to effectively conserve Maryland's rich array of birds.

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**Maryland Department of Natural Resources**

580 Taylor Avenue  
Tawes State Office Building  
Annapolis, MD 21401  
<http://www.dnr.state.md.us/wildlife/wldivplan.asp>



Canvasbacks/Larry Hindman, Maryland Department of Natural Resources

*Twenty important Bird Areas have been designated in Maryland, which will help make good management decisions to conserve Maryland's rich array of birds and many other wildlife species.*



Measuring old-growth forests/Maryland Department of Natural Resources

# Massachusetts Comprehensive Wildlife Conservation Strategy

## From Vision to On-the-Ground Action

The loss of habitat and the secondary impacts to wildlands and wildlife from increased water use and pollution are the main threats addressed in Massachusetts' wildlife action plan. Whether habitat is lost to development, fragmented into smaller and smaller pieces that cannot support these species, or degraded by pollution and competition from invasive plants, our challenge is to protect enough habitat to support the species in greatest need of conservation before we lose the opportunity.

### *Working with Partners to Bring Back Wildlife and Natural Areas* **Restoring Poland Brook Wildlife Management Area**

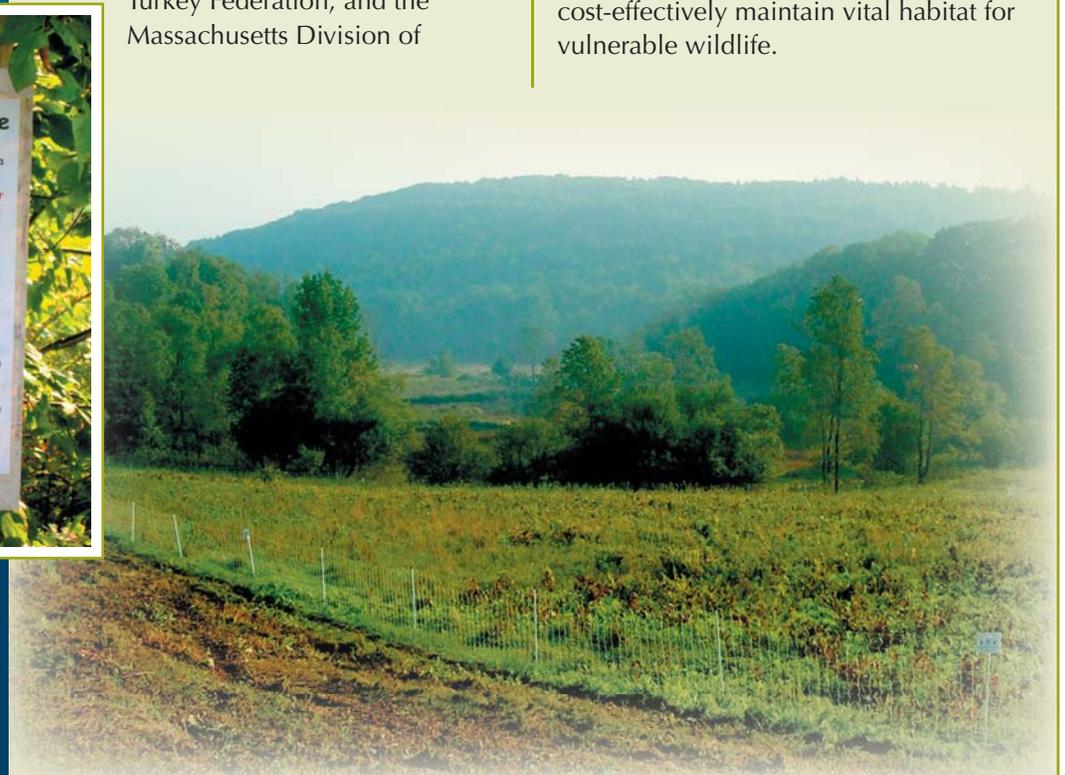
The Massachusetts Comprehensive Wildlife Conservation Strategy sets forth a vision for conservation that can be shared between many conservation organizations. The Wildlife Management Institute, National Wild Turkey Federation, and the Massachusetts Division of

Fisheries and Wildlife are working together to restore over 60 acres of abandoned fields in the Poland Brook Wildlife Management Area. Both mechanical treatments (mowing and tree cutting) and prescribed grazing are used to create and maintain nesting and feeding habitat for species of conservation need including the wood turtle, American woodcock, and mourning warbler. These innovative approaches to land management will cost-effectively maintain vital habitat for vulnerable wildlife.

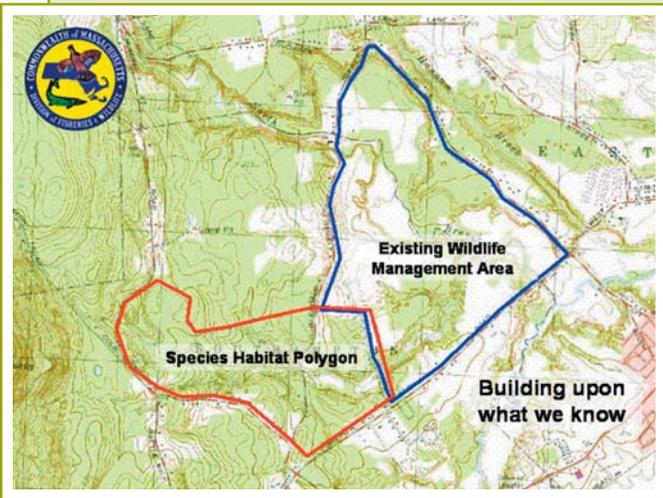
*The Wildlife Management Institute, National Wild Turkey Federation, and the Massachusetts Division of Fisheries and Wildlife are working together to restore over 60 acres of abandoned fields in the Poland Brook Wildlife Management Area.*



Working for wildlife/John O'Leary, Massachusetts Division of Fisheries and Wildlife



Poland Brook Wildlife Management Area/John O'Leary, Massachusetts Division of Fisheries and Wildlife



A hypothetical example of using new habitat information to target conservation efforts/John O'Leary, Massachusetts Division of Fisheries and Wildlife

### **Gathering Information to Take Action Mapping Critical Habitat for Strategic Land Protection**

Obtaining better information on species in greatest need of conservation is an important aspect of Massachusetts' conservation strategy. The Natural Heritage and Endangered Species Program created new maps that show the current locations and potential habitats for animals on the Massachusetts endangered species list. These maps highlight the need to add onto existing protected property to conserve habitat for imperiled wildlife. The Land Acquisition Program of the Massachusetts Division of Fisheries and Wildlife uses this information to refine the areas targeted for conservation. This improved information helped add over 4,000 acres of habitat to the 160,000 already protected by the Massachusetts Division of Fisheries and Wildlife.

### **Protecting Imperiled Land, Water, and Wildlife Conserving Surrenden Farms Habitat**

Loss of habitat is the number one threat to wildlife identified in the Massachusetts conservation strategy. The Petapawag

Area of Critical Environmental Concern contains important habitat for 16 state-listed species, wells that provide 100% of the water supply for two towns, and recreational features like the Nashua River Rail Trail. The Surrenden Farms property in the Petapawag area was purchased in 2006, protecting over 680 acres of riparian, grassland and forest areas and forming a contiguous 1500+ acre block of protected land. Conserving the Surrenden Farms property

is an important element in protecting the entire Petapawag area, which will conserve habitat for species in greatest need of conservation and benefit people by providing outdoor recreational opportunities and protecting a water supply for local residents.

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[www.wildlifeactionplans.org](http://www.wildlifeactionplans.org)

### **Massachusetts Division of Fisheries and Wildlife**

1 Rabbit Hill Rd  
Westborough, MA 01581  
[http://www.mass.gov/dfwele/dfw/habitat/cwcs/cwcs\\_home.htm](http://www.mass.gov/dfwele/dfw/habitat/cwcs/cwcs_home.htm)



Surrenden Farms property/John O'Leary, Massachusetts Division of Fisheries and Wildlife

*Conserving the Surrenden Farms property is important to protecting the entire Petapawag area, which will conserve habitat for species in greatest need of conservation and benefit people by providing outdoor recreational opportunities and protecting a water supply for local residents.*

# Michigan Wildlife Action Plan

## From Vision to On-the-Ground Action

**T**he Michigan Wildlife Action Plan takes a primarily habitat-based approach to conserving wildlife, focusing on “landscape features,” such as prairies, bogs, large rivers, and coastal dunes. The plan recommends conservation actions on a regional basis. Invasive species and habitat fragmentation are identified within the plan as the highest priority threats to wildlife and landscape features in both aquatic and terrestrial systems throughout Michigan. The wildlife action plan looks at the needs of more than 400 vulnerable wildlife species and identifies several priority threats and issues that need to be addressed to prevent the state’s wildlife from declining.

### *Working with Partners to Bring Back Wildlife and Natural Areas*

#### **Helping Private Landowners Conserve Wildlife Habitat**

Creating conservation partnerships with private landowners is a high priority in Michigan’s wildlife action plan since 79% of Michigan is privately-owned and more than 75% of the state’s endangered and threatened species are found on private land. Michigan’s Landowner Incentive Program provides financial and technical

assistance to private landowners to help restore habitat for wildlife. In the first four years, the program focused on 3 priority regions: southern Michigan prairies, savannahs, and wetlands; northern Lower Peninsula jack pines barrens; and moist conifers in the Upper Peninsula. During this period the program funded 374 projects on 15,017 acres and provided technical assistance to 543 landowners on 48,320 acres. Prescribed fires, mechanical shrub removal, invasive plant removal, prairie planting, wetland restoration, and tree plantings benefit 91 vulnerable

*In its first four years, Michigan’s Landowner Incentive Program funded 374 projects on 15,017 acres and provided technical assistance to 543 landowners on 48,320 acres. Prescribed fires, mechanical shrub removal, invasive plant removal, prairie planting, wetland restoration, and tree plantings benefit 91 vulnerable wildlife species.*



Prescribed burn on private land in Northern Lower Peninsula/Brian Piccolo, Michigan Department of Natural Resources



Prairie at Algonac State Park/Raymond Rustem, Michigan Department of Natural Resources

wildlife species. These actions also benefit more common species that use the same resources, helping to conserve them before they become rare and more costly to protect.

### ***Gathering Information to Take Action*** **Conserving Important Grassland Bird Sites**

Many grasslands birds are identified as species of greatest conservation need in Michigan's wildlife action plan, due to their marked declines in recent decades. The Michigan Natural Features Inventory helped identify sites in Michigan that are critical for the continued protection of grassland birds. More than 14,500 birds were observed at nearly 900 sites throughout Michigan. This research helps biologists understand distributions and habitat needs for birds like the bobolink, grasshopper sparrow, and Henslow's sparrow. These results will identify the best sites for conservation of Michigan's grassland birds and increase the effectiveness of conservation practices so that future generations can enjoy these species.

### ***Proactive Efforts that Benefit Wildlife and People*** **Involving the Public in Conservation**

Michigan's wildlife action plan identifies as priority actions the need to educate the public about conservation threats and to improve social attitudes toward wildlife and habitats. Michigan's Conservation Stewards Program strives to address these issues by delivering high quality, locally-based training to

create an informed citizenry who will practice community-based volunteer conservation activities. Thus far, nearly 100 Conservation Stewards have been certified and have already contributed over 3,800 hours of volunteer service worth more than \$70,000. Assessments of participants indicate improvements in their ecological knowledge and their connection to the land, which greatly benefits the Michigan Department of Natural Resources in its efforts to conserve wildlife and vital natural areas for future generations.

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### **Michigan Department of Natural Resources, Wildlife**

P.O. Box 30444  
Lansing, MI 48909  
[http://www.michigan.gov/dnr/0,1607,7-153-10370\\_30909---,00.html](http://www.michigan.gov/dnr/0,1607,7-153-10370_30909---,00.html)

*Thus far, nearly 100 Conservation Stewards have been certified and have already contributed over 3,800 hours of volunteer service worth more than \$70,000.*



Conservation Stewards learning about water quality sampling/Michigan State University Extension

# Minnesota Wildlife Action Plan

## From Vision to On-the-Ground Action

**M**innesota's wildlife action plan articulates three goals and outlines priority conservation actions that the Department of Natural Resources (DNR) and partners can adopt and adapt to their unique interests and capacities. Organized within a framework of 25 ecological landscapes, 292 species are identified as in greatest need of conservation, along with their key habitats. Habitat loss and degradation are the most significant problems facing wildlife in Minnesota, which also impact the economic and cultural benefits of a healthy environment, including people's opportunity to enjoy quality outdoor experiences.

### *Protecting Imperiled Land, Water, and Wildlife*

#### **Preserving and Restoring Bluff Prairie Habitat**

Habitat restoration is a strategy of Minnesota's wildlife action plan Goal I, which is to stabilize and increase species in greatest conservation need. The Blufflands contain remnant goat prairies, steep bluffs, and cold-water trout streams and support the state's richest complement of rare wildlife.

Rural residential development and encroaching woody vegetation are increasingly fragmenting bluff prairies and oak savannas, negatively affecting 156 species in greatest conservation need. A multi-faceted initiative underway will restore and preserve critical habitat for timber rattlesnakes and other wildlife on both public and private lands. Actions include hand-cutting of red cedars and invasive brush, prescribed burning, controlling non-native invasive species, and purchasing conservation easements. These strategies will conserve bluff prairie

*A multi-faceted initiative underway will restore and preserve critical bluff prairie habitat for timber rattlesnakes and other wildlife on both public and private lands, benefiting these natural systems, wildlife, and people.*



Nelson Bluff before cutting/Minnesota Department of Natural Resources



Nelson Bluff after cutting/Minnesota Department of Natural Resources

at a landscape level in southeastern Minnesota, benefiting these natural systems, wildlife, and people.

### ***Gathering Information to Take Action*** **Expanding Butterfly Surveys**

Goal II of Minnesota's wildlife action plan aims to improve knowledge about species in greatest conservation need to inform management and conservation recommendations. A recent butterfly survey in Minnesota's southwest prairies indicated population declines for several species. Imminent increases in mining, wind power, and biofuel activities in southwestern Minnesota necessitate improved data for developing technical guidance on land use and habitat management to conserve species in greatest conservation need. Thus, there is an urgent need for more intensive surveys of rare prairie butterflies to evaluate their status and distribution in the face of continuing habitat loss and possible population collapse. Improved knowledge of these butterflies is essential for effective conservation of wildlife for future generations.

### ***Working with Partners to Bring Back*** ***Wildlife and Natural Areas*** **Promoting Public Education** **of Minnesota's Wild and Rare**

Enhancing public appreciation of species in greatest conservation need is Goal III in the wildlife action plan. Minnesotans can now look into a beaver pond, walk

alongside a forest glade, and experience a treetop bird-watching perch on the Minnesota Zoo's renovated Minnesota Trail. In collaboration with the Minnesota DNR, content from the wildlife action plan was integrated into displays and exhibits, where a "Minnesota's Wild and Rare" logo denotes species in greatest conservation need. A highly popular Wild and Rare embossing activity was developed along the trail with companion resources published on agency and zoo websites. These messages raise awareness that some of Minnesota's wildlife are in trouble and habitat protection is vital, and offer practical steps to begin addressing the challenges. This project will help Minnesota create a conservation-minded public and fulfill its responsibility to conserve wildlife and the places they live for future generations.

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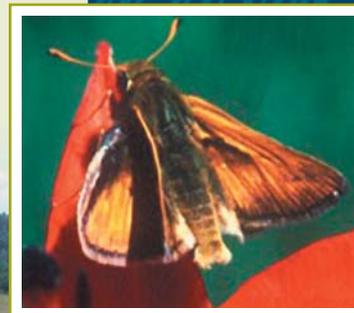
### **Minnesota Department of Natural Resources**

500 Lafayette Road  
St. Paul, MN 55155  
<http://www.dnr.state.mn.us/cwcs/index.html>



Wild and Rare logo/Minnesota Department of Natural Resources

*Collaboration with the Minnesota Zoo on Minnesota's Wild and Rare will help create a conservation-minded public and fulfill its responsibility to conserve wildlife and the places they live for future generations.*



Butterfly and prairie/Minnesota Department of Natural Resources

# Mississippi Comprehensive Wildlife Conservation Strategy

## From Vision to On-the-Ground Action

**E**xpert surveys and data from the Mississippi Natural Heritage Program led to the identification of 297 species of greatest conservation need and their habitats in Mississippi's Comprehensive Wildlife Conservation Strategy. Sixty-four habitat types were grouped into inland terrestrial, flowing water, standing water, and marine categories. Habitats were prioritized according to the number of species of greatest conservation need found in each and by the degree of imperilment of these species. Mississippi's strategy represents a habitat-based approach to conserve rare, declining, and common species.

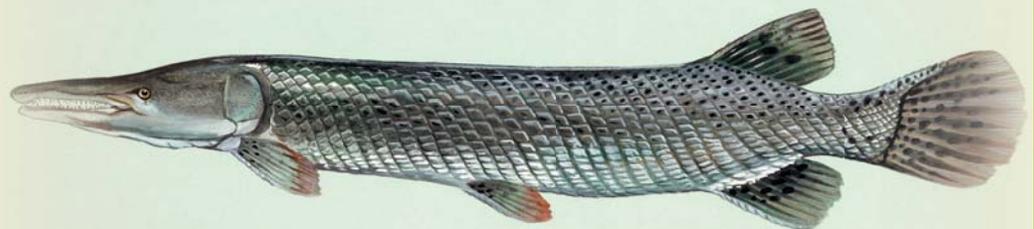
### *Protecting Imperiled Land, Water, and Wildlife*

#### **Conserving Mississippi's Alligator Gar**

Mississippi's comprehensive wildlife conservation strategy has prioritized learning more about the alligator gar, a large fish which grows up to thirteen feet and weighs hundreds of pounds. Once abundant in southern Mississippi, the alligator gar population has dwindled

over the last century, making the alligator gar extremely rare in the Mississippi Delta and possibly along the Gulf Coast. State Wildlife Grants are now helping to provide baseline status information on coastal alligator gar. Such information is essential to make effective management decisions. By gathering this information now, proactive conservation measures can be put in place to conserve the alligator gar for future generations.

*Mississippi's comprehensive wildlife conservation strategy has prioritized learning more about the alligator gar, a large fish which grows up to thirteen feet and weighs hundreds of pounds.*



Alligator gar/U.S. Fish and Wildlife Service



Rafinesque's big-eared bat/Mississippi Department of Wildlife, Fisheries, and Parks

### ***Working with Partners to Bring Back Wildlife and Natural Areas*** **Creating Habitat for Bats**

Bats help people by eating insects and pollinating plants. Out of the 14 bat species found in Mississippi, two are endangered and seven more are species of greatest conservation need in Mississippi's conservation strategy. Loss of habitat has not only affected the places where bats find food but it has also significantly limited the shelters where they rest. The objective of a State Wildlife Grants project is to study habitat for bats and evaluate the feasibility of enhancing bat populations by providing artificial shelters for them to rest. This will prevent the listing of even more bat species as endangered, saving taxpayer money by avoiding paperwork and costly litigation.

### ***Proactive Efforts that Benefit Wildlife and People*** **Preventing Damage by Invasive Species**

Plants and animals that do not naturally occur in an area can be extremely disruptive to the natural balance of an ecosystem. Controlling these non-native

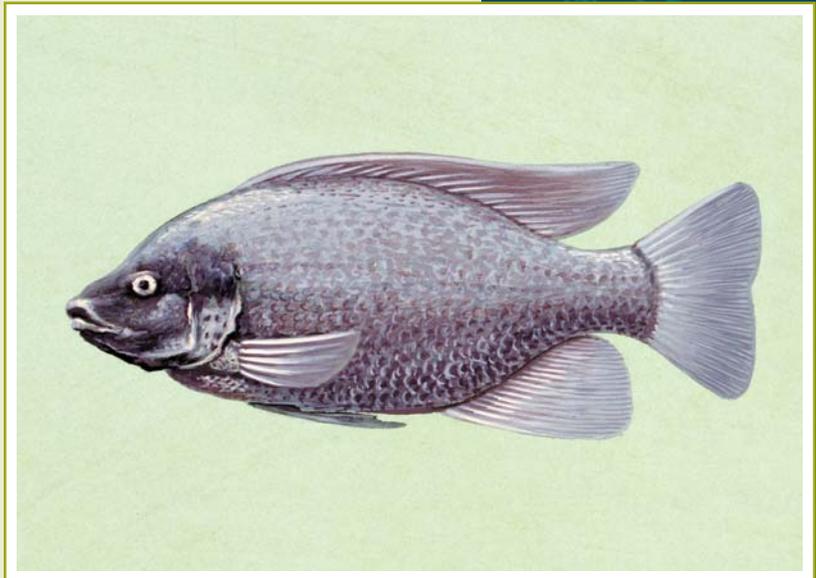
species, especially in aquatic ecosystems, is a high priority in Mississippi's conservation strategy. Tilapia is a freshwater fish that has been introduced to Mississippi's waters and has been identified as a potentially serious threat. A State Wildlife Grants-funded project is looking at the seasonal movement of tilapia and how they were introduced to Mississippi. Such information is vital to develop a proactive plan for controlling the spread of this invasive fish.

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### **Mississippi Department of Wildlife, Fisheries, and Parks**

1505 Eastover Drive  
Jackson, MS 39211  
<http://www.mdwfp.com/level1/cwcs.asp>



Tilapia/U.S. Fish and Wildlife Service

*Plants and animals that do not naturally occur in an area can be extremely disruptive to the natural balance of an ecosystem. Controlling these non-native species, especially in aquatic ecosystems, is a high priority in Mississippi's conservation strategy.*

# Missouri Comprehensive Wildlife Strategy

## From Vision to On-the-Ground Action

Using wildlife information gathered over the past 30 years, Missouri's comprehensive wildlife strategy promotes management that benefits all wildlife, rather than targeting single species. The strategy identifies 36 Conservation Opportunity Areas in which management strategies will conserve both wildlife populations and the natural systems on which they depend. The Department of Conservation, other public agencies, private conservation organizations, and citizen conservationists are using the Conservation Opportunity Areas to focus their efforts for wildlife and their habitats.

*Maintaining healthy populations of Ozark fish means healthier waters overall, ultimately benefiting people as well.*

### *Working with Partners to Bring Back Wildlife and Natural Areas* **Mid-America Regional Council Brings Together Conservation Partners**

term goal is to connect Kickapoo Island to Weston Bend State Park and create a bridge of restored habitat across the floodplain to forests in Kansas, which will provide important habitat for migrating birds. Working together with local entities makes it possible to conserve vital wildlife and natural areas for future generations.

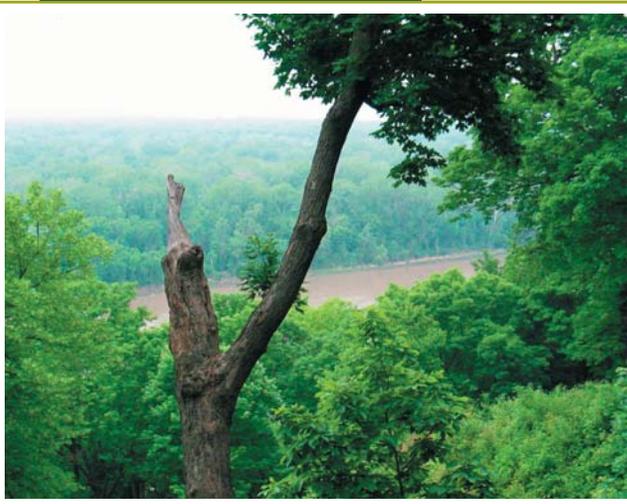
### *Proactive Efforts that Benefit Wildlife and People*

### **Restoring Access to Ozark Fish Habitat**

Priority objectives in Missouri's wildlife strategy include improving water quality and stream habitat and removing environmental threats. Low water crossings in the Niangua River basin, a Conservation Opportunity Area, impede movement of fish between bridges, including the Niangua darter and other fish, mussels, and crayfish of the Ozarks. In 2006, two low water crossings in the Little Niangua River were replaced with clear-span bridges, recovering access to 14.4 miles of stream habitat for Niangua darters. Subsequent monitoring revealed that Niangua darter numbers increased

Conservation Opportunity Areas in Missouri's comprehensive wildlife strategy provide a strategic platform for building community-based conservation partnerships. The Missouri River floodplain has been drastically altered by extensive draining and levees, reducing its value to wildlife. The

Mid-America Regional Council is leading an ambitious group of stakeholders to restore aquatic and floodplain habitats along the river near Weston Bend, collaborating with local, county, state, and federal partners. The Army Corps of Engineers purchased 200 acres of land on Kickapoo Island in 2007. The long



Missouri River habitat/David Bedan

after bridge replacement and fish diversity increased upstream of all crossings. A future project will make another 8.4 miles of stream habitat available. Maintaining healthy populations of Ozark fish means healthier waters overall, ultimately benefiting people as well.

**Protecting Imperiled Land, Water, and Wildlife**

**Restoring Sand Prairies to Prevent Wildlife from Becoming Endangered**

Sand prairies are the rarest natural community in southeast Missouri and conserving them is a regional priority in Missouri's wildlife strategy. Sand prairies support imperiled plants like snoutbean, sand hickory, Hall's bulrush, and jointweed. Animals include dusty hognose snakes, Illinois chorus frogs, bobwhite quail, Eastern meadowlarks, native bees, and sand cicadas. A new Habitat Initiative has brought together a diverse partnership, including the U.S. Fish and Wildlife Service, Natural Resources Conservation Service, three universities, Charleston Baptist

Association, Missouri Botanical Garden, and the Missouri Departments of Conservation and Natural Resources. This new habitat effort and diverse partnership will help restore habitat for rare and declining species, preventing the need to list them as endangered species.

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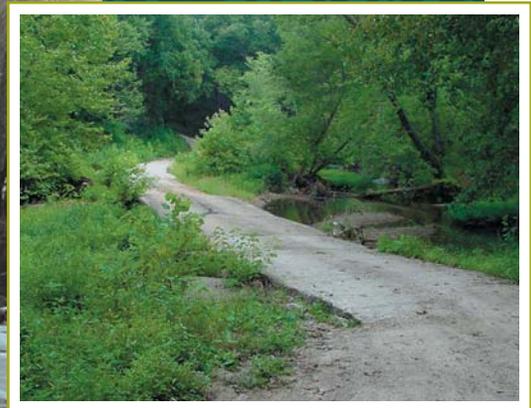
**Missouri Department of Conservation**

PO Box 180  
Jefferson City, MO 65109  
<http://www.mdc.mo.gov/nathis/protecting.htm>



Dusty hognose snake/Bob Gillespie, Missouri Department of Conservation

*A new sand prairie conservation effort and diverse partnership will help restore habitat for rare and declining species, preventing the need to list them as endangered species.*



Previous bridge/Craig Fuller, Missouri Department of Conservation

New bridge allows fish passage/Craig Fuller, Missouri Department of Conservation

Over 4,000 westslope cutthroats were restored to 19.5 miles of newly secured habitat and 12,000 non-native trout were removed from headwater streams. This collaborative work will help conserve Montana's state fish and clean waters that benefit both wildlife and people.

# Montana Comprehensive Fish & Wildlife Conservation Strategy

## From Vision to On-the-Ground Action

The Montana Comprehensive Fish and Wildlife Conservation Strategy extensively analyzes 636 species of fish and wildlife and the places they live. Four components are highlighted: geographic focus areas, fish and wildlife community types at risk, species of greatest conservation need, and species in need of inventory. Geographic focus areas are starting points for Montana Fish, Wildlife and Parks and partners to direct combined conservation efforts for Montana's imperiled wildlife and vital natural areas.

### Protecting Imperiled Land, Water, and Wildlife

#### Conserving Westslope Cutthroat Trout

Westslope cutthroat trout are a priority species in Montana's conservation strategy and have twice been reviewed for threatened species listing. Today, westslope cutthroat trout are confined to less than 5% of their historical range. Threats include impacts from non-native trout, habitat loss, and pollution. In northcentral Montana in 2007, over 12,000 non-native trout

were removed from headwater streams, over 4,000 westslope cutthroats were restored to 19.5 miles of newly secured habitat. In addition, a Federal Candidate Conservation Agreement with Assurances was completed by the state for ranchers in the Big Belt Mountains. Conservation partners include the U.S. Fish and Wildlife Service, U.S. Forest Service, Bureau of Land Management, and a Montana power company. This collaborative work will help conserve Montana's state fish and the clean waters upon which it depends, benefiting both wildlife and people.



Westslope cutthroat trout/David Moser, Montana Fish, Wildlife and Parks



Transferring trout by helicopter/David Moser, Montana Fish, Wildlife and Parks

**Proactive Efforts that Benefit  
Wildlife and People**

## **Helping Montana's Fast Growing Communities Plan for Wildlife Conservation**

Rapid population growth and a developing suburban culture in five of Montana's counties create new challenges for implementation of Montana's Comprehensive Fish & Wildlife Conservation Strategy. Issues include increased subdivision development, urban wildlife conflicts, and a lack of local land planning experience. To address these challenges, a new land planning specialist works with local planning board members, county commissioners, and local land trusts to help implement the conservation strategy. Work has already begun to conserve riparian habitat, prioritize open space use, collect baseline data, and educate citizens about living with wildlife. As Montana's communities continue to grow, these proactive efforts will help conserve wildlife and vital natural areas for future generations.

**Working with Partners to Bring Back  
Wildlife and Natural Areas**

## **Restoring Trumpeter Swans in the Blackfoot Valley**

Once nearly extinct, trumpeter swans occupy little of their former range, prompting the designation of species in greatest need of conservation in Montana. Reintroductions of trumpeter swans are taking place to recover trumpeter swans regionally and nationally. Partners include the U.S. Fish & Wildlife Service and their Partners for Fish & Wildlife program and the 660 landowners, conservationists, agencies, foundations and businesses of the Blackfoot Challenge Conservation Working

Group. In June 2007, ten captive-reared swans were released on a wetland near Ovando. Four other swans were released near Lincoln in August 2007. Over 200 sightings of the released birds in Blackfoot Valley are good signs of success. Restoration efforts will conserve the trumpeter swan before it becomes more rare and more costly to protect.

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### **Montana Fish, Wildlife, and Parks Division**

1420 East 6th Ave.  
PO Box 200701  
Helena, MT 59620  
[http://fwp.mt.gov/specieshabitat/strategy/  
actionplan.html](http://fwp.mt.gov/specieshabitat/strategy/actionplan.html)



Residential development in south Missoula County/  
National Agricultural Inventory Program

*Reintroductions of  
trumpeter swans  
are taking place to  
recover trumpeter  
swans regionally  
and nationally.*



Banded trumpeter swans on the wing near Ovando  
after relocation/Alex Badyaev

# Nebraska Natural Legacy Project

## From Vision to On-the-Ground Action

*Least terns and piping plovers nested on the re-created islands, marking these species' first use of sandbars in the central Platte River in more than a decade. This successful restoration project will serve as a model for future efforts to conserve fish and wildlife before they become more rare and costly to protect.*

The Nebraska Natural Legacy Project brought together a diverse group of conservation and agricultural partners to improve wildlife conservation planning and implementation. The Natural Legacy Plan identified 40 biologically unique landscapes that contain high quality examples of the state's natural communities and host the greatest known assemblages of fish and wildlife diversity. Community-based conservation initiatives are being launched in many of these landscapes to implement the Natural Legacy Plan.

### **Working with Partners to Bring Back Wildlife and Natural Areas Restoring the Central Platte River**

The Natural Legacy Project identified the central Platte River as a biologically unique landscape in need of

conservation. Each spring the river comes alive with over half a million sandhill cranes and tens of thousands of ducks, geese, and shorebirds, creating a world class wildlife-viewing spectacle. In 2006, a 200-acre tract of river channel was purchased using federal, state, and private funds to protect critical

roost habitat. Restoration work included invasive tree removal, river channel recontouring, construction of nesting islands, and reseeded with native prairie seed. Within weeks of the restoration, endangered whooping cranes roosted on the river. In 2007, 10 pairs of least terns and two pairs of piping plovers successfully nested on the re-created

islands, marking these species' first use of sandbars in the central Platte River in more than a decade. This successful restoration project will serve as a model for future efforts to conserve fish and wildlife before they become more rare and costly to protect.

### **Protecting Imperiled Land, Water, and Wildlife**

#### **Conserving Tallgrass Prairies**

To conserve the largest and highest quality tallgrass prairies remaining in the nation, Nebraska has launched two Natural Legacy Flagship Initiatives that are developing diverse partnerships between landowners, local communities, and conservation organizations. With less than 2 percent of the state's tallgrass prairie remaining, there is an urgent need to step-up conservation efforts to protect vital habitat for the greater prairie chicken, massasauga (snake), Ottoe skipper (butterfly), and other at-risk species. The spread of invasive species due to fire suppression and certain grazing practices is a principal threat. The Flagship Initiatives provide private landowners with technical and financial assistance to control invasive species and implement management practices such as rotational grazing and prescribed burning. These collaborative efforts help



Piping plover nest on the Platte River/  
Matt Schwarz, U.S. Fish and Wildlife Service

conserve wildlife and provide current and future generations with natural places needed for wildlife recreation.

***Proactive Efforts that Benefit Wildlife and People***

**Wildcat Hills Conservation**

The rugged escarpments of western Nebraska's Wildcat Hills are both historic and serve as an example of a biologically unique landscape. The Wildcat Hills helped guide early pioneers on their westward journey but are now threatened by development and invasive species. The Wildcat Hills Flagship Initiative is bringing together a diverse group of partners to aid in land protection and improve management on private lands. Rocky Mountain bighorn sheep, an at-risk species, were recently reintroduced to the Wildcat Hills and research is being conducted to determine how prescribed burning and grazing can be used to control invasive species that

are impacting wildlife and ranching. The effort is also focused on improving awareness of the Wildcat Hills and its wildlife and fostering nature-based recreation opportunities to diversify and strengthen the local economy.

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**Nebraska Game and Parks Commission**

2200 N. 33rd St.  
Lincoln, NE 68503  
<http://www.ngpc.state.ne.us/wildlife/programs/legacy/>



Bighorn sheep/NEBRASKAland Magazine/  
Nebraska Game and Parks Commission

*The Wildcat Hills  
Flagship Initiative  
is bringing together  
a diverse group  
of partners to aid  
in land protection  
and improve  
management on  
private lands.*



Tallgrass prairie/NEBRASKAland Magazine/Nebraska Game and Parks Commission

*Lockes Ranch is one of only two locations where the threatened Railroad Valley springfish lives and provides important habitat for the Lockes springsnail, western toad, and many migratory birds. Restoration efforts will conserve these native wildlife before they become more rare and more costly to protect.*

# Nevada Wildlife Action Plan

## From Vision to On-the-Ground Action

**T**hroughout Nevada, water is a scarce and valuable resource essential for both human needs and maintenance of wildlife and their habitats. Consequently, the alteration of hydrologic resources is a significant source of stress to wildlife resources. Nevada is also one of the fastest growing states in the nation, with human population creating a need for additional development into open space, causing habitat loss. One of the most critical threats to wildlife conservation in Nevada today is the rapid conversion, due to wildfire, of sagebrush, Mojave, and shadscale shrub habitats to invasive annual grasses and forbs.

### *Protecting Imperiled Land, Water, and Wildlife*

#### **Restoring Habitat for Railroad Valley Springfish**

Conservation of wildlife found in Railroad Valley brooks and streams is a high priority in Nevada's wildlife action plan. Lockes Ranch is one of only two locations where the threatened Railroad Valley springfish lives and provides important habitat for the Lockes

springsnail, western toad, and many migratory birds. The Nevada Department of Wildlife, using State Wildlife Grants and U.S. Fish and Wildlife Service funding, is working with federal and state partners to restore the ranch, which includes the removal of diversion ditches, installation of off-site watering for cattle and big game, and stream restoration. These efforts will help conserve these native Nevada species before they become more rare and more costly to protect.



Lockes Ranch/Nevada Department of Wildlife



Mountain beaver/David Catalano

### ***Gathering Information to Take Action*** **Learning About Mountain Beavers in the Sierra Nevadas**

Nevada’s wildlife action plan identifies the need to research the mountain beaver to better understand its habitat and needs. State Wildlife Grants funds are being used to study mountain beavers in the Sierra Nevada Range of Nevada and recent surveys indicate 12 small distinct colonies in the far western edge of Nevada in the Carson Range. Radio tracking of individual beavers provides information on the dispersal of young from their burrows of birth and the establishment of individual home ranges. Such work helps the Nevada Department of Wildlife and state and federal partners protect and enhance this unique species, recently demonstrated by the development and use of best management practices to protect mountain beaver habitat during a water pipeline construction project.

### ***Working with Partners to Bring Back Wildlife and Natural Areas*** **Surveying Peregrine Falcons**

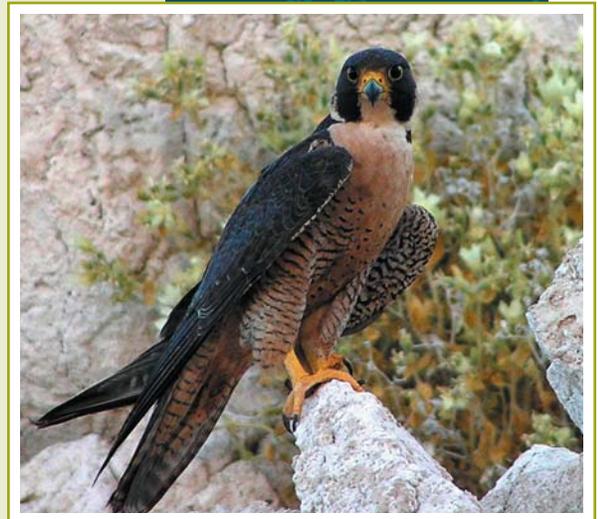
Peregrine falcons only build nests in cliff and canyon habitats, making the protection of these areas vital to their continued existence and expansion in Nevada – efforts that are prioritized in Nevada’s wildlife action plan. Once a federal endangered species, the peregrine falcon has made a remarkable comeback across the country. To effectively conserve habitat, good information is needed on where falcons live. The Nevada Department of Wildlife, U.S. Fish and Wildlife Service, and National Park Service have increased survey efforts, which have documented the peregrine falcon’s expanding range. These are good indicators that the peregrine falcon populations are recovering in southern Nevada, verifying that current and previous conservation efforts have been effective in conserving this species for future generations to enjoy.

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### **Nevada Department of Wildlife**

1100 Valley Rd.  
Reno, NV 89512  
<http://www.ndow.org/wild/conservation/cwcs/>



Peregrine falcon/Christina Klingner

*Peregrine falcon populations are recovering in southern Nevada, verifying that current and previous efforts have been effective in conserving this species for future generations to enjoy.*

# New Hampshire Wildlife Action Plan

## From Vision to On-the-Ground Action

**T**he greatest current and future danger for New Hampshire's wildlife is conversion of wildlife habitat into surfaces and structures - in a word, development. New Hampshire is the fastest growing state in the Northeast. Many habitats are rapidly disappearing or are fragmented by roads and dams, and many ecosystems are pushed out of balance by human activities. Even the best-protected wildlife populations and habitats - and the clean air and water they depend on - are threatened by climate change, environmental degradation, and pollution.

### *Protecting Imperiled Land, Water and Wildlife*

#### **Restoring Karner Blue Butterflies in New Hampshire**

Karner blue butterfly caterpillars only eat wild blue lupine leaves, making the protection of pine barrens habitat their most important conservation action in New Hampshire's wildlife action plan. Conserving pine barrens for Karner blues also benefits other species such as frosted elfin and skipper butterflies, pine barrens moths, Eastern hognose snakes,

grasshopper sparrows, and common nighthawks. After being lost from the state in 1999, a Karner blue butterfly captive rearing project has led to a current population of 1,500. Habitat restoration includes planting blue lupine plants, controlled burns and mechanical clearing to mimic natural disturbances. From 2005 to 2007, Karner blue butterflies were documented at all life stages in the wild. This is a strong indication that Karner blue butterflies are nearing recovery in New Hampshire so that future generations will be able to enjoy New Hampshire's state butterfly.

*A successful restoration project has brought New Hampshire's state butterfly, the Karner blue butterfly, back to the state. Conserving pine barren habitat for Karner blues also benefits many other wildlife species.*



Karner blue butterfly/Ben Kimball

## ***Gathering Information to Take Action*** **Conserving Timber Rattlesnakes**

New Hampshire's wildlife action plan directs conservation efforts for timber rattlesnakes to maintain and restore populations. The timber rattlesnake is possibly the most rare wildlife species in



Timber rattlesnake/Mike Marchand

New Hampshire and is state-endangered in four other states. New Hampshire's immediate goal is to protect its only known remaining population of timber rattle-

snakes. To do that, more information was needed so biologists evaluated habitat conditions, estimated the population size, and collected skins shed by snakes for further analysis. This biological information will help biologists develop a detailed recovery plan for the state and region, conduct reviews for potential listing under the federal Endangered Species Act, and determine whether New Hampshire's timber rattlesnakes are genetically unique from other populations in the region, all of which will help conserve this snake before it becomes more rare and costly to protect.

### ***Proactive Efforts that Benefit Wildlife and People***

## **Mapping New Hampshire's Wildlife Habitat**

The most significant accomplishment since the approval of New Hampshire's wildlife action plan has been the creation of new and improved Wildlife Habitat Maps for the entire state. The new maps identify the highest quality wildlife habitats in the state, called Conservation Focus Areas, and are usable by towns, land trusts, and others to see how their town fits into the bigger landscape while still respecting local priorities. As New

Hampshire's communities grow, these tools will help communities take a proactive approach toward conservation that balances human interests with wildlife and avoids costly conflicts by preventing endangered species listings.

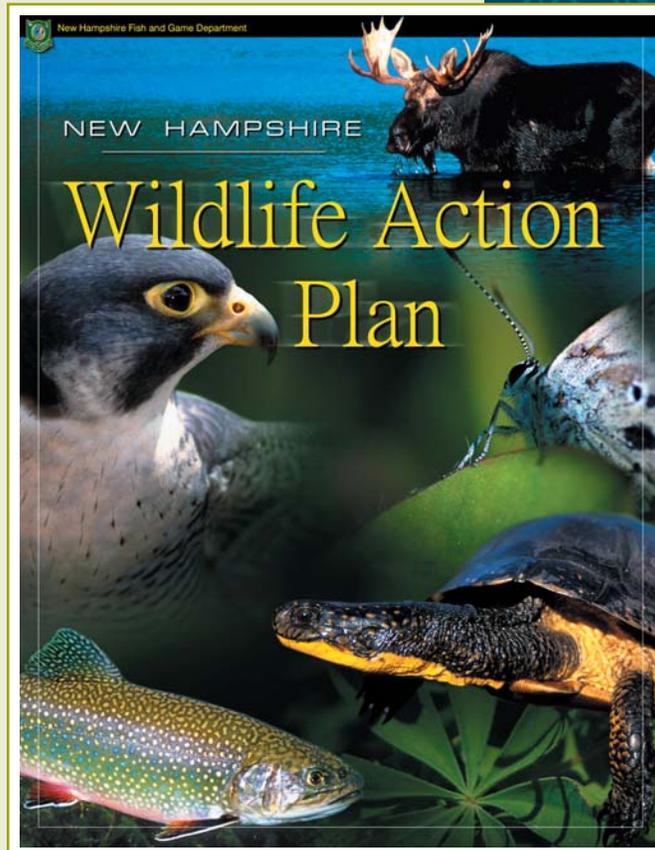
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## **New Hampshire Fish and Game Department**

11 Hazen Drive  
Concord, NH 03301  
[http://www.wildlife.state.nh.us/Wildlife/wildlife\\_plan.htm](http://www.wildlife.state.nh.us/Wildlife/wildlife_plan.htm)

*As New Hampshire's communities grow, new and improved Wildlife Habitat Maps help communities take a proactive approach toward conservation that balances human interests with wildlife and helps avoid costly endangered species listings.*



New Hampshire Wildlife Action Plan/  
New Hampshire Fish and Game Department

*By simultaneously protecting shorebirds and educating the public, New Jersey is efficiently conserving migrant shorebird populations before they become rare and costly to protect.*

# New Jersey Wildlife Action Plan

## From Vision to On-the-Ground Action

New Jersey's wildlife action plan embodies the collective judgment of the state's conservation professionals regarding which species should receive special attention and what actions should be taken. This ecosystem-based management strategy focuses heavily on habitat and species protection, management, and restoration. The primary threats to state wildlife include habitat fragmentation, invasive species, and contaminants.

### *Working with Partners to Bring Back Wildlife and Natural Areas*

#### **Helping Private Landowners Conserve Vital Habitat**

A major goal of New Jersey's wildlife action plan is to conserve habitat for rare and imperiled wildlife. New Jersey's Habitat Incentive Team, using Landowner Incentive Program funding, has increased landowner participation in private land conservation programs by simplifying

processes and providing funding and technical assistance. A major golf resort in Sussex County is planting native grasses for birds, restoring wetlands for the endangered bog turtle, and protecting a breeding pool for frogs, toads, and salamanders. Overall, nearly 4,000 acres of grasslands are being managed for wildlife so far, 2,000 of which have been restored to native grasses, helping New Jersey fulfill its responsibility to conserve wildlife and the places they live for future generations.



Prescribed burn by Habitat Incentive Team/New Jersey Division of Fish and Wildlife



Landowners benefiting from the Habitat Incentive Team/New Jersey Division of Fish and Wildlife



Visitors on a shorebird viewing platform/New Jersey Division of Fish and Wildlife

### ***Proactive Efforts that Benefit Wildlife and People***

## **Educating Ecotourists and Conserving Migrating Shorebirds**

Protecting, recovering, and enhancing habitat for rare wildlife are important priorities in New Jersey's wildlife action plan. Thousands of migrating shorebirds stop in Delaware Bay to double their body weight on the way to Arctic nesting grounds. Endangered red knots and other migratory shorebirds feed on the eggs from the Western hemisphere's highest concentration of spawning horseshoe crabs. But as crab populations have declined from over-harvest, the birds are increasingly at risk. New Jersey has actively monitored shorebirds, identified causes of decline, and is committed to the recovery of shorebird populations on Delaware Bay. Efforts include protecting important feeding beaches. Since 2003, shorebird stewards have been present at viewing areas and all critical shorebird beaches to educate visitors and protect feeding and resting shorebirds from disturbance by beach walkers and unleashed dogs. By simultaneously protecting shorebirds and educating the public, New Jersey is efficiently conserving migrant shorebird populations before they become rare and costly to protect.

## **Protecting Imperiled Land, Water, and Wildlife Conserving Wood Turtles and Healthy Waters**

New Jersey's wildlife action plan calls for the protection and recovery of threatened and endangered wildlife and for enhancement of their habitats. The health of wildlife is often an early indicator of disease and pollution that affect us all.

The state-threatened wood turtle depends on clean water for survival and is often used as an indicator of water quality, including waterways that provide drinking water for New Jersey citizens. Biologists are using radio tracking methods to learn more about the wood turtle's habitat needs and to locate sites to restore populations most in peril. By conserving the wood turtle, New Jersey protects clean waters that benefit wildlife and people.

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### **New Jersey Division of Fish & Wildlife**

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Trenton, NJ 08625  
<http://www.state.nj.us/dep/fgw/ensp/waphome.htm>



Wood turtle/New Jersey Division of Fish and Wildlife

*The state-threatened wood turtle depends on clean water for survival and is often used as an indicator of water quality, including waterways that provide drinking water for New Jersey citizens.*

# New Mexico Comprehensive Wildlife Conservation Strategy

## From Vision to On-the-Ground Action

**T**he Comprehensive Wildlife Conservation Strategy for New Mexico focuses on species of greatest conservation need, key wildlife habitats, and the challenges affecting the conservation of both. The overriding desired outcome is that New Mexico's key habitats will persist in the condition, connectivity, and quantity necessary to sustain viable and resilient populations of wildlife while hosting a variety of land uses with reduced conflicts.

### *Working with Partners to Bring Back Wildlife and Natural Areas* **Restoring Zuni Bluehead Suckers**

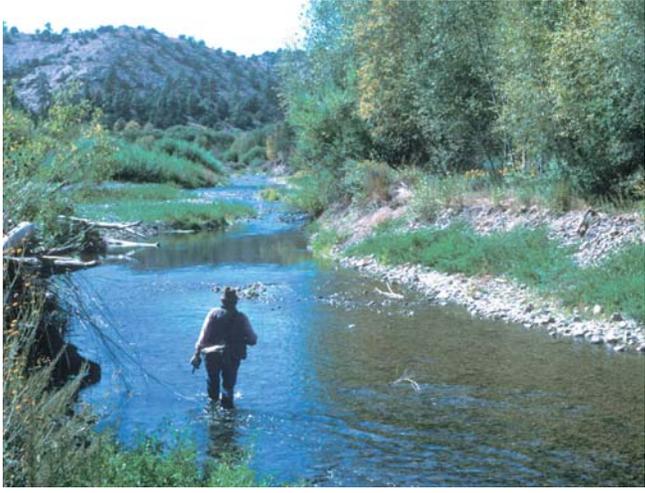
New Mexico's Comprehensive Wildlife Conservation Strategy identifies conservation actions for recovery of the Zuni bluehead sucker. Found in only 10% of its historic range, this fish is state endangered in New Mexico and a federal endangered species candidate. In partnership with the tribal Zuni Fish

and Wildlife Department and others, the New Mexico Department of Game and Fish launched projects to improve habitat for the Zuni bluehead sucker and to remove predatory non-native green sunfish and crayfish. Additionally, the Department and The Nature Conservancy have purchased habitat for the species, protecting nearly its entire occupied range for the long term. Conserving the Zuni bluehead sucker and its habitat means cleaner water, benefiting people as well.

*In partnership with the tribal Zuni Fish and Wildlife Department and others, the New Mexico Department of Game and Fish launched projects to improve habitat for the Zuni bluehead sucker and to remove predatory non-native green sunfish and crayfish.*



Partners collect Zuni bluehead suckers for captive rearing studies/Matthew Silva



Fisherman enjoying the undeveloped Gila River/New Mexico Department of Game and Fish

### **Gathering Information to Take Action Conserving Wildlife in the Gila River Riparian Area**

The Gila River is the last main stem waterway in New Mexico without a major water development and contains at least 49 species of greatest conservation need. New Mexico's Comprehensive Wildlife Conservation Strategy emphasizes obtaining abundance and distribution information for such priority wildlife, particularly in the riparian areas that border streams. Amphibians, reptiles, birds, and riparian vegetation are being surveyed to provide baseline data about this riparian ecosystem, which is facing threats from several types of development and modification. Obtaining such information will ensure efficient and cost-effective management and use of resources throughout the Gila watershed, conserving wildlife and natural areas for future generations.

### **Protecting Imperiled Land, Water, and Wildlife Conserving Texas Hornshell Mussels**

The Black River harbors the highest diversity of native aquatic wildlife among New Mexico's permanent streams, including over 25 species of greatest conservation need such as the Texas hornshell mussel, a federal endangered species candidate. The Texas hornshell is the sole surviving species of

six native freshwater mussels that once lived in the lower Pecos River drainage of southeastern New Mexico. It is currently found only on private land along a 7-mile stretch of the Black River. Collaborative conservation efforts among municipal, state, and federal agencies, Miami University, and private landowners have focused on determining where and how mussels live, captive rearing, restoring water quality, and involving stakeholders in the recovery. This important work will help conserve this mussel before it becomes more costly to protect.

*The Black River harbors the highest diversity of native aquatic wildlife among New Mexico's permanent streams, including over 25 species of greatest conservation need such as the Texas hornshell mussel.*

### **Association of Fish & Wildlife Agencies**

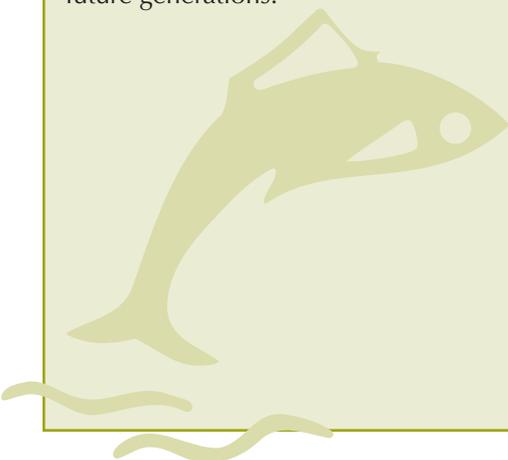
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### **New Mexico Department of Game and Fish**

P.O. Box 25112  
Santa Fe, NM 87504  
<http://fws-nmcfwru.nmsu.edu/cwcs/>



Snorkel survey for Texas hornshell mussels/Brian Lang, New Mexico Department of Game and Fish



# New York Comprehensive Wildlife Conservation Strategy

## From Vision to On-the-Ground Action



*Longear sunfish were raised in stock ponds and then released into three historical waters during 2006 and 2007, helping to ensure that this colorful fish continues to live in New York waters for future generations.*

The New York Department of Environmental Conservation is using its wildlife action plan to enhance the state's efforts to conserve species that improve the lives of New York residents and visitors. Planners used the state's major watersheds to organize the strategy, both to instill a sense of place to partners and to build on the state's successful watershed programs, many of which have been running for over 30 years.

### *Proactive Efforts that Benefit Wildlife and People*

#### **Restoring Longear Sunfish**

New York's Comprehensive Wildlife Conservation Strategy identified the longear sunfish as a priority species in its historic watersheds. Pollution from suburban development and intense agricultural practices have reduced this fish to a single, small population in its New York range. With

State Wildlife Grants funds, university researchers and state fisheries staff determined that several waters where longear sunfish used to live still retain good habitat. Longear sunfish were raised in stock ponds and then released into three historical waters during 2006 and 2007. Follow-up surveys reveal that fish have survived – an early indication of success. These proactive restoration efforts will help ensure that this colorful fish continues to live in New York waters for future generations.

### *Gathering Information to Take Action*

#### **Conserving the Spruce Grouse**

New York's conservation strategy prioritizes developing a long-term monitoring program to determine spruce grouse population and habitat patterns. The spruce grouse is endangered in New York and recent evidence suggests that its numbers are still declining. In partnership with the State University of New York, the Department of Environmental Conservation surveyed spruce grouse locations, radio-tagged individual birds to track movements, and examined habitat. Findings support the idea that as the state's lowland boreal forests mature, they may be less suitable for spruce grouse. Information from this study will help New York make smart management decisions to ensure the species' long-term persistence in the state.

### *Protecting Imperiled Land, Water, and Wildlife*

#### **Conserving Karner Blue Butterflies**

The drastic decline of the Karner blue butterfly in the last 50 years has attracted widespread public attention and its conservation has become a priority



Longear sunfish/Scott Wells

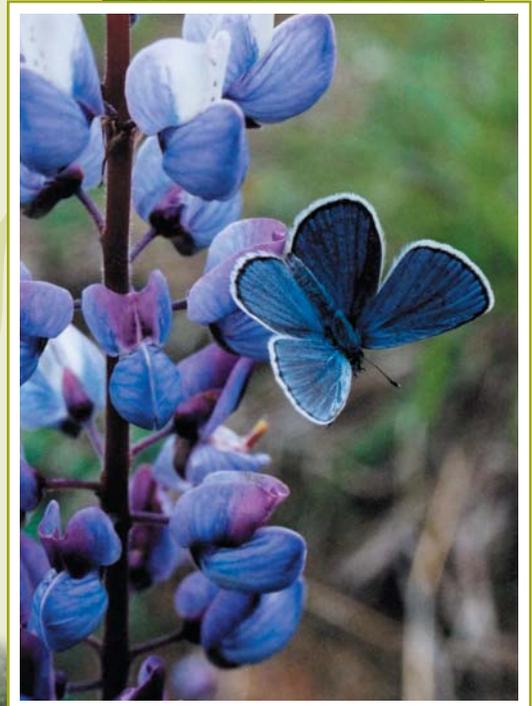
in New York's conservation strategy. The primary causes of the decline are habitat loss and degradation due to human activities such as agriculture, urbanization, and fire suppression, which negatively affect other wildlife as well. With State Wildlife Grants funding, former habitat has been restored by clearing invasive trees and planting native grasses and wildflowers, especially wild blue lupine, the exclusive food source for Karner blue caterpillars. Butterflies have already colonized portions of the restored area, a good sign of success. Such restoration efforts are helping to conserve the Karner blue butterfly and other wildlife before they become more rare and costly to protect.

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### New York Department of Environmental Conservation

625 Broadway  
Albany, NY 12233  
<http://www.dec.ny.gov/animals/9404.html>



Karner blue butterfly on wild lupine/Carly Voight



Spruce grouse with radio collar/Angelena Ross

*Habitat restoration efforts such as invasive tree removal and planting native grasses and wildflowers are helping to conserve the Karner blue butterfly and other wildlife before they become more rare and costly to protect.*

# North Carolina Wildlife Action Plan

## From Vision to On-the-Ground Action

**N**orth Carolina's wildlife action plan takes a habitat-based approach to address the needs of the state's wildlife. The plan gives 371 species priority status for conservation efforts. It categorizes those species with 23 habitat types, such as beach/dunes, floodplain forests, bogs and associated wetlands, or one of 17 river basins in the state. The plan identifies threats and appropriate conservation actions by habitat and includes strategies for urban wildlife management, private lands management, land conservation, and conservation education, outreach, and recreation.

*The Wildlife Resources Commission works with local and federal partners to collect native fish from the wild and place them into a rehabilitated stretch of Pigeon River. Maintaining natural, healthy populations of wildlife in North Carolina's rivers means cleaner and healthier waters overall, benefiting people as well.*

### *Protecting Imperiled Land, Water, and Wildlife*

#### **Restoring Native Fish to Pigeon River**

Restoration of priority species is a key component of North Carolina's wildlife action plan. Nearly 100 years of pollution from a paper mill severely damaged a stretch of Pigeon River in North Carolina. Corporate investments in cleaner processes and better waste management have reversed the pollution, but surveys indicate that many native fish species were lost, including striped and

silver shiners, which are priority species. The Wildlife Resources Commission is working with local and federal partners to collect these and other native fish species from the wild and place them into the rehabilitated stretch of Pigeon River. Gilt darters and silver, striped, telescope, mirror, and saffron shiners have been reintroduced and follow-up sampling has revealed early indications of success. Maintaining natural, healthy populations of fish and wildlife in North Carolina's rivers means cleaner and healthier waters overall, which ultimately benefits people as well.



Pigeon River/North Carolina Wildlife Resources Commission



Sampling Pigeon River/North Carolina Wildlife Resources Commission



Bat house during construction/North Carolina Wildlife Resources Commission

### *Proactive Efforts that Benefit Wildlife and People*

## **Building a Rafinesque's Big-eared Bat House**

The Rafinesque's big-eared bat is a priority species in North Carolina's wildlife action plan. Roost caves are threatened by frequent human visitation. The bats also use old abandoned buildings to raise young during the summer. One old house was regularly monitored until it burned down in 2005. To provide a roosting site for the displaced bats, the North Carolina Wildlife Resources Commission and several partners built an artificial bat house near Hurricane Creek in July 2007. This bat house provides additional habitat for this winged mammal and ensures the long-term viability of monitoring efforts, which will help prevent the Rafinesque's big-eared bat from becoming endangered and avoid more costly recovery efforts.

### *Gathering Information to Take Action*

## **Researching the Robust Redhorse**

Not much is known about the robust redhorse, a fish that eluded observation for over 100 years until its rediscovery in 1980. The wildlife action plan has prioritized obtaining more information

on its life history and identifying areas critical to its survival. State and federal agencies, utility companies, and conservationists are all working together to help the robust redhorse. Spring electrofishing provides information about robust redhorse abundance and locations, including mating areas. Radio transmitters help biologists determine where the fish go during the year and what habitats they are using. These results will help evaluate

the effects of hydropower operation on the robust redhorse and inform recommendations for energy production which meets the needs of this fish and other species that depend on healthy waters. This information will allow North Carolina to make good, cost-effective management decisions regarding this fish and the healthy waters it needs for survival.

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### **North Carolina Wildlife Resources Commission**

1722 Mail Service Center  
Raleigh, NC 27699  
[http://www.ncwildlife.org/pg07\\_wildlifespeciescon/pg7c1.htm](http://www.ncwildlife.org/pg07_wildlifespeciescon/pg7c1.htm)



Robust redhorse/North Carolina Wildlife Resources Commission

*State and federal agencies, utility companies, and conservationists are all working together to help the robust redhorse.*

# North Dakota Comprehensive Wildlife Conservation Strategy

## From Vision to On-the-Ground Action

The North Dakota Comprehensive Wildlife Conservation Strategy is a habitat-based approach to conserving all types of fish and wildlife including rare, declining, common, nongame and game species. Twenty-one focus areas represent unique natural community types rare to North Dakota and habitats especially crucial to species of conservation priority. The key to ensuring long-term survival of these resources in North Dakota is to maintain diverse grasslands, wetlands, woodlands, rivers and streams.

### *Proactive Efforts that Benefit Wildlife and People*

#### **Removing Invasive Trees in Grassland, Wetland and Riparian Habitats**

Restoring habitat is a key priority in the North Dakota Comprehensive Wildlife Conservation Strategy. Russian olive is a non-native tree known for invading riparian areas, grasslands, and wetlands, where it crowds out cottonwoods and willows and reduces the number of grassland-dependent birds – including eight priority species. To enhance habitat for these and other wildlife species, and to restore riparian and grassland habitat to a more natural state, the North Dakota Game and Fish Department is removing Russian olive and other unwanted woody vegetation from key wildlife management areas. Such proactive efforts will benefit the birds and other wildlife that depend upon these areas, conserving them before they become rare and more costly to protect.



Russian olive removal/North Dakota Game and Fish Department

### *Working with Partners to Bring Back Wildlife and Natural Areas*

#### **Conserving Rare Mammals in North Dakota**

The North Dakota conservation strategy recommends filling data gaps to establish baseline information on little-known animals. Hunted and trapped nearly to extinction in the 1900s, river otters are thought to be re-colonizing portions

of North Dakota, yet no formal research had been conducted to evaluate otters and other rare mammals like the fisher and Eastern spotted skunk. Since 2006, researchers from Frostburg State University have worked closely with state, federal, local agencies and landowners

and have found otters throughout much of eastern North Dakota. Although fishers and spotted skunks were rarely seen, researchers discovered another mammal long thought gone – the American marten, which seems to be established throughout the Turtle Mountains. This information will help better manage these rare species so they do not become endangered.

*Researchers discovered a mammal long thought gone – the American marten, which seems to be established throughout the Turtle Mountains. This vital information will help manage rare species so they do not become endangered.*

## *Gathering Information to Take Action* **Studying the Long-billed Curlew in Southwestern North Dakota**

The North Dakota conservation strategy places a high priority on the long-billed curlew because of its declining numbers. The long-billed curlew is the largest shorebird in North America with a distinctive 8-inch, down-curved bill. The curlew was once found throughout the Great Plains; however, human influences on the landscape are destroying its habitat and shrinking its range. Understanding its population size and distribution is critically important to conservationists, managers and biologists concerned with widespread alteration and loss of its habitat. Recent surveys revealed that a small population exists in the southwestern part of the state. Survey routes have been designated so biologists can monitor the curlew over the long-term. Information from this research will provide cost effective monitoring recommendations to help conserve this graceful bird for future generations of North Dakotans.

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Long-billed curlew/North Dakota Game and Fish Department

*Understanding the population size and distribution of the long-billed curlew is critically important to conservationists, managers and biologists concerned with widespread alteration and loss of its habitat.*



American marten/Frostburg State University

*Conserving native island wildlife, such as tree snails, is an important conservation priority in the Comprehensive Wildlife Conservation Strategy of the Northern Mariana Islands.*

# Comprehensive Wildlife Conservation Strategy for the Commonwealth of the Northern Mariana Islands

## From Vision to On-the-Ground Action

**T**he comprehensive wildlife conservation strategy for the Northern Mariana Islands uses an “islands framework.” Each of the islands represents its own ecosystem, with its own capacity to support native wildlife, based on its size, the extent and condition of native forest cover, impacts of human population in both the marine and terrestrial environments, frequency of natural disasters (typhoons and volcanic eruptions), and the presence of feral animals. Conservation actions were developed that could be applied to individual island ecosystems to further the conservation of species of special conservation need.

### *Protecting Imperiled Land, Water, and Wildlife*

## Conserving Native Tree Snails on Sarigan Island

Conserving native island wildlife, such as tree snails, is an important conservation priority in the Comprehensive Wildlife

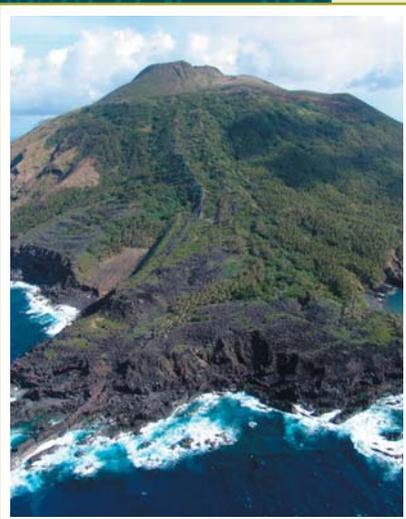
Conservation Strategy of the Northern Mariana Islands. Humped tree snails were abundant on the island of Sarigan in 1992. Sarigan has been negatively impacted from feral goats and pigs consuming understory vegetation, threatening forest regeneration. In response, all feral animals were removed in the late 1990s and the forest has since begun to recover. The conservation strategy prioritized determining whether healthy Humped tree snail populations still exist. A State Wildlife Grants funded expedition in 2006 revealed that native forests on Sarigan support the healthiest tree snail populations known in the Mariana

Islands. Humped tree snails were found in the highest densities known for the species. In addition, seven new species of ground-dwelling snails were discovered on Sarigan, making a diverse array of 22 snail species. With the island of Sarigan rapidly recovering from the effects of feral animal browsing, it is imperative that conservation measures be taken to prevent the introduction of snail predators, such as non-native flatworms. Such efforts will conserve Sarigan’s diverse wildlife and vital natural areas for future generations.

### *Gathering Information to Take Action*

## Searching for Unique Tree Snails on Aguiguan Island

Land snails in tropical Pacific islands are extremely diverse and many are found nowhere else, but they are rapidly disappearing. The Northern Marianas’ conservation strategy prioritized visiting Aguiguan Island to determine whether Langford’s and humped tree snails still exist on the island. Previous surveys in the early 1990s had found the humped



Sarigan Island/Curt Kessler

tree snail throughout the Mariana Islands, while the Langford's tree snail was known to live exclusively on the tiny, remote island of Aguiguan. With State Wildlife Grants funding, a University of Guam researcher surveyed the island in 2006, but found no living Langford's tree snails and found evidence that the tree snails had died long before. A non-native, predatory flatworm is likely the cause for the disappearance of this tree snail, underscoring the need to prevent non-native, invasive wildlife from pushing out native wildlife.

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### **Commonwealth of the Northern Mariana Islands Division of Fish and Wildlife**

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<http://www.dfw.gov.mp/>



Humped tree snail/Gayle Martin, CNMI Division of Fish and Wildlife

*A State Wildlife Grants funded expedition in 2006 revealed that native forests on Saipan support the healthiest tree snail populations known in the Mariana Islands.*



Aguiguan Island/Fred Amidon

# Ohio Wildlife Action Plan

## From Vision to On-the-Ground Action

Ohio's wildlife action plan is an extension of Ohio's larger planning system, which includes a long-term strategic plan to address the threats and opportunities for Ohio's fish and wildlife resources. The wildlife action plan focuses on wildlife, their habitat, and people of the state. It approaches fish and wildlife conservation with diverse strategies that involve not only the Division of Wildlife, but also private landowners, conservation organizations, and other governmental agencies.

### *Working with Partners to Bring Back Wildlife and Natural Areas*

#### **Restoring the Lake Erie Water Snake**

The Lake Erie water snake has one of the smallest ranges of any vertebrate in the world. It is only found on the islands of Lake Erie, which comprise one of four unique habitats identified in Ohio's wildlife action plan. To conserve this state endangered reptile, the Lake Erie Islands Chapter of the Black Swamp Conservancy and the Division of Wildlife have

established permanent Lake Erie water snake conservation easements on the islands. Annual surveys have indicated a population of 7000 snakes, significantly more than the 5555 snakes needed for population recovery as defined in the U.S. Fish and Wildlife Service's Recovery Plan. Ongoing educational programs garner support for the protection of the snake and demonstrate its value as an island-dependent species. These proactive efforts will conserve the Lake Erie water snake before it becomes more rare and more costly to protect.

*The Lake Erie Islands Chapter of the Black Swamp Conservancy and the Division of Wildlife have established permanent Lake Erie water snake conservation easements on the islands of Lake Erie to conserve this state endangered reptile.*



Lake Erie water snake/Kristin Stanford



Cave salamander/Jim McCormac

### ***Proactive Efforts that Benefit Wildlife and People***

## **Working with Citizen Scientists for Wildlife**

Ohio's wildlife action plan involves numerous partners, including Ohio citizens. The Ohio Division of Wildlife sponsors volunteer-based statewide survey efforts through the Frog and Toad Calling Survey, Breeding Bird Survey, Long-term Butterfly Monitoring Program, Winter Bird Survey, Salamander Monitoring Program, Wetland Breeding Bird Survey, and the Ohio Spider Survey. These endeavors engage hundreds of wildlife enthusiasts in meaningful data collection to provide seasonal, annual, and long-term changes in wildlife populations, both in response to natural processes and habitat modifications. Ohio's citizen scientists help the Division identify vulnerable species and observe declines before species become imperiled. They also document species-rich habitats to target for conservation. These collaborative efforts will conserve Ohio's wildlife and vital natural areas for future generations.

## ***Protecting Imperiled Land, Water, and Wildlife*** **Conserving the Appalachian Foothills**

Managing habitat to benefit species of greatest conservation need is a major strategy in Ohio's wildlife action plan. Conservation efforts in the Appalachian Foothills Focus Area benefit over 50 species of greatest conservation need, including the bobcat, Indiana bat, cerulean warbler, red-shouldered hawk, eastern box turtle, and timber rattlesnake. Studies are in progress to determine wildlife responses to management activities. The results will be used to appropriately alter activities to provide the greatest benefit to the area's wildlife. Other efforts include reintroducing the endangered American burying beetle where high-quality beetle habitat exists. The Ohio State University Terrestrial Ecology Laboratory has been collaborating with the Division of Wildlife on numerous projects that will be used to develop sustainable timber management. Conserving these wildlife and natural areas enhances the quality of life for Ohio's residents.

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***Conservation efforts in the Appalachian Foothills Focus Area benefit over 50 species of greatest conservation need, including the bobcat, Indiana bat, cerulean warbler, red-shouldered hawk, eastern box turtle, and timber rattlesnake.***



Red-shouldered hawk/Tim Daniel

# Oklahoma Wildlife Action Plan

## From Vision to On-the-Ground Action

Oklahoma's wildlife action plan applies a habitat-based approach to address the state's 240 priority wildlife species, dividing the state into six ecological regions and 22 habitat-types. It covers important conservation issues, recommends conservation actions, and identifies potential conservation partners in each region. By focusing on the health of Oklahoma's natural areas, actions may benefit multiple wildlife species before their populations become more rare and more costly to protect.

*Restoring the rabbitsfoot mussels will benefit the health of wildlife and people and may prevent the need to list this species as threatened or endangered.*

### **Working with Partners to Bring Back Wildlife and Natural Areas Restoring Rabbitsfoot Mussels in the Verdigris River**

The rabbitsfoot mussel is a species of greatest conservation need in Oklahoma's wildlife action plan and a species under consideration for possible federal listing

by the U.S. Fish and Wildlife Service. The Oklahoma Department of Wildlife Conservation has partnered with the Kansas Department of Wildlife and Parks, Oklahoma State University, and Missouri State University to re-establish the rabbitsfoot in the upper Verdigris River.

The recent discovery of a reproducing rabbitsfoot population in the Oklahoma portion of the Verdigris River provides an opportunity to collect juvenile mussels in Oklahoma to raise and release in Kansas. Restoring the rabbitsfoot mussels will benefit the health of wildlife and people and may prevent the need to list this species as threatened or endangered.

### **Gathering Information to Take Action Assessing Swainson's Warblers**

The Oklahoma wildlife action plan identifies the Swainson's Warbler as a species of greatest conservation need and its bottomland hardwood forest habitat as a high priority habitat. The Oklahoma Department of Wildlife Conservation has partnered with Northeastern Oklahoma State University to expand knowledge of the current distribution of Swainson's Warblers and the composition of breeding bird communities in bottomland hardwood forests. In 2006 and 2007, four new breeding Swainson's warbler populations were discovered on four Wildlife Management Areas in separate watersheds. Improving habitat conditions for the Swainson's warbler on these areas will benefit other species of greatest conservation need in bottomland hardwood forests, including Prothonotary Warblers, Hooded Warblers, American Woodcock, and Swamp Rabbits. This proactive effort will conserve the Swainson's warbler and other wildlife before they become rare and more costly to protect.



Rabbitsfoot mussels from the Verdigris River/  
Joe Bidwell and Chad Boeckman

**Proactive Efforts that Benefit Wildlife and People**  
**Conserving Cave and Spring Wildlife**

Oklahoma’s wildlife action plan identifies caves and their associated springs as one of the highest priority habitat types in the Oklahoma Ozarks. They are essential habitat for at least 18 species of greatest conservation need, including two salamanders, four bats, one cave fish, and eleven cave arthropods. With State Wildlife Grants funding, the Oklahoma Department of Wildlife Conservation has partnered with the Oklahoma Biological Survey and Natural Investigations Company (California) to conduct biological inventories of 34 caves and 31 springs in the Ozark Plateau. During this effort, new populations of grotto salamander and cave salamander and several crustacean species were discovered. This new information increases the known population size and

geographic range of these species and provides better information for taking proactive conservation measures that may avoid future endangered species listings and help conserve these unique animals before they become more rare and more costly to protect.

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A cave crayfish found only in the Oklahoma Ozarks/Dante Fenolio



Swainson's warbler on nest/Mia Revels, Oklahoma Department of Wildlife Conservation

*Improving habitat conditions for the Swainson's Warbler on these areas will benefit other species of greatest conservation need in bottomland hardwood forests, including Prothonotary Warblers, Hooded Warblers, American Woodcock, and Swamp Rabbits.*

# Oregon Conservation Strategy

## From Vision to On-the-Ground Action

*Monitoring efforts in Oregon paid off with the early detection and quarantine of a boat infested with invasive quagga mussels. Prevention, early detection and swift action will help protect native fish and wildlife from invasive species, before more costly measures are needed.*

**T**he Oregon Conservation Strategy provides a long-term blueprint for all Oregonians to use to help maintain and improve the state's natural resources today and for future generations. It is a non-regulatory, statewide conservation approach that identifies species and habitats most in need of conservation, the issues and problems affecting them, and key conservation actions, research, and monitoring needed to address those issues.

### *Proactive Efforts that Benefit Wildlife and People*

#### **Holding the Line on Invasive Mussels**

The Oregon Conservation Strategy identifies invasive species as a key issue of concern. Today, Oregon is attempting to hold the line against destructive quagga mussels that are spreading across the country. States infested with invasive mussels spend millions of dollars each year to keep water systems unclogged and ecosystems balanced. Experts believe if quaggas enter Oregon, it will be by boat or houseboat so the Marine Board, Department of Fish and Wildlife, invasive species groups, and others are mobilizing resources to protect Oregon's freshwaters from what would be a costly management effort. Workshops, boat washing demonstrations, and media events are being used to spread the word. Recently, monitoring efforts paid off with the early detection and quarantine of a quagga-infested boat. Prevention, early detection and swift action will help protect native fish and wildlife from invasive species, before more costly measures are needed.

### *Gathering Information to Take Action Involving Students in Bobolink Surveys*

#### **Bobolink Surveys**

Often, in order to determine what conservation actions are needed for a priority species, more information is needed. In Oregon, the bright and bubbly call of the bobolink is rarely heard – due to land use change and other factors, this grassland species is declining. To get a population estimate and determine what habitats the birds use, Oregon Department of Fish and Wildlife staff are working with a local high school biology teacher to gather data. Over the next two summers, teachers and students will trap and band bobolinks. This collaborative research will help conserve the bobolink before it becomes rare and costly to protect.



An invasive quagga mussel/California Department of Fish and Game



Bobolink habitat in eastern Oregon/Oregon Department of Fish and Wildlife

**Protecting Imperiled land, Water,  
and Wildlife**

## **Restoring a Rich Coastal Estuary**

Estuaries, where freshwater rivers meet the salty ocean, are a priority habitat in the Oregon Conservation Strategy. In a landmark project to restore a slough to its natural state, concrete dikes were removed from Alsea Bay to restore natural processes that create and maintain estuarine habitats. For the first time in 40 years, tidal waters from the estuary of Alsea Bay reached what was once – and will be again – marshland habitat. Priority species in the area include bald eagles, band-tailed pigeons, California brown pelicans, Caspian terns, shorebirds, chum salmon, coho salmon, and winter steelhead. Restoring important wetland habitat for wildlife means cleaner waters overall, benefiting people as well.

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conservationstrategy/](http://www.dfw.state.or.us/conservationstrategy/)



Marshland restoration/Oregon Department of Fish and Wildlife

*In a landmark project to restore a slough to its natural state, concrete dikes were removed from Alsea Bay to restore natural processes that create and maintain estuarine habitats.*

# Pennsylvania Wildlife Action Plan

## From Vision to On-the-Ground Action

**T**he Pennsylvania Wildlife Action Plan encompasses five guiding principles: (1) conserving species-at-risk, (2) keeping common species common, (3) recognizing the unique role of Pennsylvania, (4) encouraging voluntary partnerships for species, habitats and people, and (5) taking a comprehensive approach to address strategies and priorities at the species, habitat, and species-group levels.

### *Protecting Imperiled Land, Water, and Wildlife*

#### **Critical Grassland and Prairie Habitat Acquisition**

Pennsylvania's Wildlife Action Plan calls for identifying and protecting high-priority habitats as a way to protect imperiled species. Grassland-dependent species have been identified as highly imperiled in Pennsylvania. With State Wildlife Grants funding, the Pennsylvania Game Commission

purchased Piney Tract, protecting one of the "crown jewels" of grassland habitats remaining in the Commonwealth. The conservation value of this project is significant – priority species such as the state-threatened upland sandpiper, state-endangered short-eared owl, Henslow's sparrow, savannah sparrow, grasshopper sparrow, bobolink, northern harrier and others occur on this site. In addition to the direct wildlife benefits, this site will provide recreational opportunities to wildlife watchers and hunters.

*With State Wildlife Grants funding, the Pennsylvania Game Commission purchased Piney Tract, protecting one of the "crown jewels" of grassland habitats remaining in the Commonwealth.*



Henslow's sparrow/Merilee Janusz

## *Proactive Efforts that Benefit Wildlife and People*

### **Assisting Private Landowners to Conserve Vital Wildlife Habitat**

Working with private landowners to protect the Commonwealth's wildlife is a priority in Pennsylvania's Wildlife Action Plan. Private property comprises more than 85% of the Commonwealth's land area, so focusing attention on these habitats can provide far-reaching and long-term conservation benefits. Through State Wildlife Grants and other funding sources, the Pennsylvania Game Commission and Pennsylvania Fish and Boat Commission are providing technical assistance to private landowners to make their properties more attractive for fish and wildlife of conservation concern. Thus far, biologists have helped more than 380 landowners develop habitat management plans for more than 71,000 acres of prime private property. Working with landowners to establish permanent conservation easements is another important approach to protecting critical habitats. Private lands program such as these help to slow the state's ongoing decline in habitat quality and loss of wildlife habitat, benefiting wildlife before recovery becomes more difficult and costly.

### ***Gathering Information to Take Action*** **Conserving Atlantic Sturgeon in the Delaware River**

Conserving priority wildlife in Pennsylvania requires good information. The Delaware River, on Pennsylvania's eastern border, used to be the center of the world's Atlantic sturgeon population. Attaining lengths of 14 feet and weights of almost 900 lbs, Atlantic sturgeon are the largest fish found in Atlantic coastal rivers. Unfortunately, overharvest, water pollution, and habitat loss led to a drastic decline in Atlantic sturgeon populations

in the late 1800s. To obtain vital information about this species, Delaware State University researchers initiated an assessment of the current population status and breeding habitat in the Delaware River. Results indicate that the river still supports Atlantic sturgeon, but both suspected breeding and feeding habitats are at risk for future degradation, highlighting the need to conserve these critical habitats. This State Wildlife Grants-funded project provides managers with the vital information needed to recover Atlantic sturgeon in the Delaware River for future generations.

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<http://www.pgc.state.pa.us/pgc/cwp/view.asp?a=496&q=162067>

### **Pennsylvania Fish and Boat Commission**

1601 Elmerton Avenue  
Harrisburg, PA 17106-7000



Wildlife Diversity Biologist discussing habitat with a landowner/Eileen Butchkoski, Pennsylvania Game Commission

*Private lands programs help to slow the state's ongoing decline in habitat quality and loss of wildlife habitat, benefiting wildlife before recovery becomes more difficult and costly.*



Biologists preparing to release Atlantic sturgeon/Lori Brown, Delaware State University

# Rhode Island Wildlife Action Plan

## From Vision to On-the-Ground Action

**R**hode Island's wildlife action plan identifies threats to important species and habitats. Habitat loss and degradation from the associated impacts of human population growth are high on the long list of threats. This plan outlines a series of actions prescribed for the next decade to address these threats and to effectively conserve Rhode Island's important wildlife resources for future generations.

### *Protecting Imperiled Land, Water, and Wildlife*

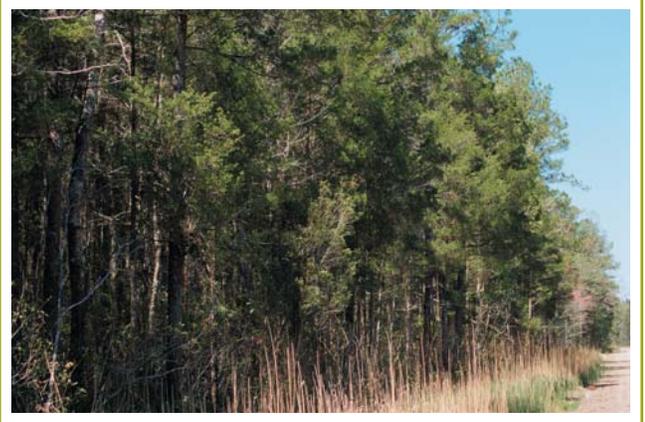
## Conserving Healthy Wetlands

The rivers and streams that run into Narragansett Bay provide critical habitat and clean water to many priority wildlife species identified in Rhode Island's wildlife action plan. State Wildlife Grants are partially funding a project that will place a conservation easement on approximately 130 acres of land along the Sakonnet River and Donovan Marsh, which flow into Narragansett Bay, ensuring that they will remain healthy even as Rhode Island's communities grow. These wetlands harbor plants and animals that help clean water and provide flood protection but are threatened by development, like many others nationwide. Conservation easements are important management tools that purchase development rights for an area but still allow other uses such as hunting, boating, and fishing. This project benefits both people and wildlife by protecting critical wildlife habitat and conserving the natural places that are important to many of our family traditions.

*Conservation easements are important management tools that purchase development rights for an area but still allow other uses such as hunting, boating, and fishing.*



Eastern spadefoot toads rely on seasonal wetlands/  
Rhode Island Division of Fish and Wildlife



Glen Avon Farm contains important white cedar habitat/U.S. Fish and Wildlife Service

### *Proactive Efforts that Benefit Wildlife and People*

## Glen Avon Farm Conservation Easement

The Glen Avon Farm, in western Rhode Island, was identified in Rhode Island's wildlife action plan as a priority conservation area in the state. A conservation easement on this 1,000 acre property will both protect wildlife habitat and provide recreational opportunities. Located next to other conservation parcels, the Glen Avon Farm will become a core conservation area of over 2,700 acres that supports several key habitats and species in need of conservation. A management plan, currently being developed, will ensure public access for hiking, hunting and fishing, improving the opportunities for public outdoor

recreation. This is a cost-effective way to conserve wildlife and natural places that bring peace and relaxation to our busy lives.

***Protecting Imperiled Land, Water, and Wildlife***

**Conserving Important Wildlife Habitat**

Protecting priority habitat, including acquiring and protecting new land, is a key component to Rhode Island's wildlife action plan. The Grills property located in Hopkinton, Rhode Island, contains several priority habitats and is strategically located next to existing conservation parcels. Placing this area into a conservation easement would protect important habitat such as wetlands and high-quality pitch pine barrens that provide habitat to the rare Hessel's hairstreak butterfly and the

imperiled New England cottontail. Protecting these important habitats benefits the wildlife that depend upon them, conserving these species before they become more rare and more costly to protect.

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**Rhode Island Division of Fish and Wildlife**

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<http://www.dem.ri.gov/programs/bnatres/fishwild/swgindex.htm>



The wood frog is a priority species on Glen Avon Farm/Rhode Island Division of Fish and Wildlife



Hessel's hairstreak butterfly/Erik Nielson

*Placing this area into a conservation easement would protect important habitat such as wetlands and high-quality pitch pine barrens that provide habitat to the rare Hessel's hairstreak butterfly and the imperiled New England cottontail.*

# South Carolina Comprehensive Wildlife Conservation Strategy

## From Vision to On-the-Ground Action

**S**outh Carolina's Comprehensive Wildlife Conservation Strategy emphasizes a cooperative, proactive approach to conservation. The needs of fish and wildlife translate into conservation actions that can cross multiple scales, with treatments recommended at the species, habitat and regional level. Eight recurring conservation action areas are emphasized: education and outreach, habitat protection, invasive and nonnative species, private land programs, public land management, regulatory actions, survey and research needs, and urban and developing lands.

### *Protecting Imperiled Land, Water, and Wildlife*

### **Providing Island Sanctuaries to Vulnerable Nesting Seabirds**

Seabirds are a high priority group in South Carolina's conservation strategy due to declines in their populations throughout the state. Seabirds often lay eggs in shallow scrapes or rough nests directly on the ground, and can easily be crushed underfoot. Human presence

makes adults abandon their nests, leaving eggs to sun damage or predation by gulls. In 2006, South Carolina designated three barrier islands as sanctuaries – Bird Key Stono, Crab Bank, and Deveaux Bank Islands – where public access is limited. The island closures have increased nesting for black skimmers, brown pelicans, royal terns and sandwich terns. South Carolina's proactive conservation efforts are helping to conserve these species before they become more rare and costly to protect.

*Three new barrier island sanctuaries (Bird Key Stono, Crab Bank, and Deveaux Bank Islands) have increased nesting for black skimmers, brown pelicans, royal terns and sandwich terns. South Carolina's proactive conservation efforts are helping to conserve these species before they become more rare and costly to protect.*



Banding royal terns chicks on Deveaux Bank/  
South Carolina Department of Natural Resources



Black skimmers nesting in increased numbers on Crab Bank/South Carolina Department of Natural Resources



Chamberlain's dwarf salamander/South Carolina Department of Natural Resources

### **Gathering Information to Take Action Improving Knowledge of South Carolina Salamanders**

The southern dusky salamander and Chamberlain's dwarf salamander are "in need of conservation" in the conservation strategy, due to local declines and incomplete data on distribution and abundance. A State Wildlife Grants-funded project aims to better understand the ecology, life history, and habitat requirements of these species and better understand the relationships within this group of salamanders. This improved information will allow better site-specific management actions for the seepage wetlands. So far, studies indicate that the southern dusky salamander does not actually occur in South Carolina but that four other previously unknown dusky salamander species do live in the South Carolina Coastal Plain. Clarifying this information will allow South Carolina to make the best cost-effective management decisions to conserve these amphibians and the habitats they depend upon.

### **Proactive Efforts that Benefit Wildlife and People Managing for Priority Wildlife on Agricultural Lands**

Cooperation with private landowners is essential to fulfilling conservation goals in South Carolina's Comprehensive Wildlife Conservation Strategy since more than 90 percent of the state's land is privately owned. A State Wildlife Grant-funded project delivers technical guidance to private landowners and agricultural producers to improve and restore habitat for priority wildlife. Three new agency biologists are working with the Natural Resources Conservation Service to incorporate habitat restoration for priority wildlife species into Farm Bill conservation programs such as the Conservation Reserve, Environmental Quality Incentives, Wetland Reserve, Wildlife Habitat Incentives, and Grassland Reserve programs. This collaboration will help ensure future generations can enjoy the natural South Carolina landscape.

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*Cooperation  
with private  
landowners is  
essential to fulfilling  
conservation goals  
in South Carolina's  
Comprehensive  
Wildlife  
Conservation  
Strategy since more  
than 90 percent of  
the state's land is  
privately owned.*



SCDNR explains the importance of native plants in the Aiken County WHIP project site/ South Carolina Department of Natural Resources

*South Dakota Game, Fish and Parks and partners conducted the first study that experimentally showed the effects of tree plantings on grassland birds. Such research is critical to understanding management practices and refining them appropriately.*

# South Dakota Wildlife Action Plan

## From Vision to On-the-Ground Action

The key to healthy people and healthy wildlife is habitat - clean air and water, healthy and diverse landscapes, and other features that help fish and wildlife survive. South Dakota's wildlife action plan identifies and locates South Dakota's essential habitats, identifies the habitats that have changed since the state was settled, determines which animals need special attention to ensure their long-term survival, and develops ways for the state to be more proactive in wildlife and habitat management.

### ***Proactive Efforts that Benefit Wildlife and People*** **Improving Management of Grassland Bird**

More than one third of the bird species of greatest conservation need in South Dakota's wildlife action plan are grassland birds, which have suffered alarming declines in North America from loss of grassland habitat. Artificial tree plantings are common efforts to provide winter wildlife cover, but they can create abrupt edges in grassland habitats. To

demonstrate the effects of tree plantings on grassland birds, South Dakota Game, Fish and Parks, the U.S. Fish and Wildlife Service, and the University of Montana conducted the first study that experimentally showed that grassland birds avoid woody edges in otherwise suitable grassland. Once trees had been removed, however, bobolink, savannah sparrow, sedge wren and dickcissel distributed themselves throughout the grasslands. Research like this is critical to understanding management practices and refining them in the appropriate manner.



Before tree removal/Frank Quamen, University of Montana



After tree removal/Frank Quamen, University of Montana



Black-crowned night-heron/Doug Backlund

### **Gathering Information to Take Action Inventory of South Dakota's Colonial Waterbirds**

An important aspect of South Dakota's wildlife action plan is to monitor changes in wildlife populations before they become endangered. South Dakota has a wealth of wetland habitats that support a variety of colonial waterbirds such as herons, egrets, terns, gulls, pelicans, and grebes. South Dakota Game, Fish and Parks partnered with the Rocky Mountain Bird Observatory to conduct a statewide inventory of waterbirds that nest in colonies and to develop a system to track them in the future. The 2006 field season confirmed breeding at 45% of the 544 sites visited. The great blue heron, double-crested cormorant, pied-billed grebe, and western grebe had the highest number of active colonies. Gathering sound biological information will help South Dakota manage species and habitats to avoid future endangered species listings.



### **Protecting Imperiled Land, Water and Wildlife Researching American Burying Beetles**

A goal in the wildlife action plan is to monitor the population size of the endangered American burying beetle, with the ultimate goal of removing it from the endangered species list. The American burying beetle has an interesting habit of burying food for its developing young. It has disappeared from most

of its former distribution; however a population was discovered in south-central South Dakota in 1995. With State Wildlife Grants funding, the Department partnered with South Dakota State University and the University of Delaware to conduct a mark and recapture study of the American burying beetle population. The population numbers between 3800 and 7800 individuals, far exceeding the 500 individuals required for a sustainable population, as defined in the U.S. Fish and Wildlife Service's Recovery Plan. This research will help avoid future conflicts over this endangered beetle.

### **Association of Fish & Wildlife Agencies**

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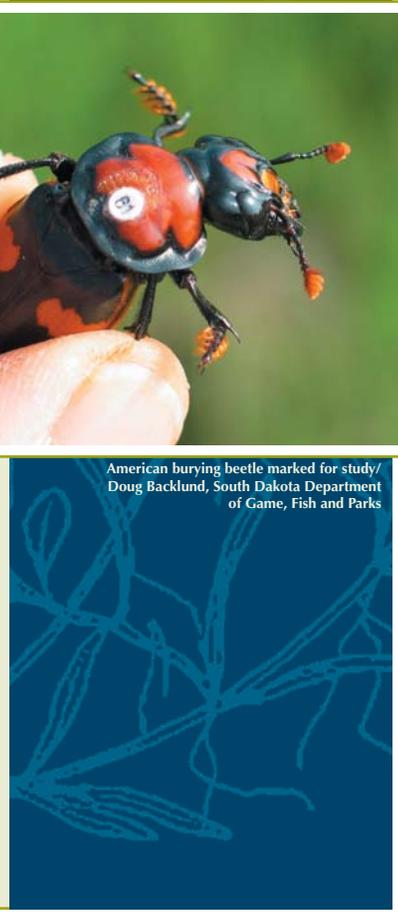
### **South Dakota Department of Game, Fish and Parks**

523 E. Capitol-Foss Bldg.  
Pierre, SD 57501-3182  
<http://www.sdgame.com/wildlife/diversity/index.htm>



American burying beetle marked for study/  
Doug Backlund, South Dakota Department  
of Game, Fish and Parks

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*To restore Panther Branch, the Tennessee Wildlife Resources Agency and Tennessee Department of Environment and Conservation removed mine refuse, restructured the stream channel, built a drainage system, and constructed artificial wetlands.*

# Tennessee Wildlife Action Plan

## From Vision to On-the-Ground Action

Tennessee's wildlife action plan identifies a total of 37 potential sources of stress that affect species of greatest conservation need and their habitats, including incompatible land use and development. Tennessee's human population is projected to grow by 1.5 million people by the year 2025. This projected growth will require communities to plan for and meet the needs of its citizens while conserving and managing the land, water, and wildlife resources that enhance the quality of life within and near those same communities.

### *Working with Partners to Bring Back Wildlife and Natural Areas*

#### **Restoring Polluted Aquatic Habitat**

Restoring aquatic habitat to benefit aquatic wildlife is an important goal in Tennessee's wildlife action plan. Refuse from underground mines that were abandoned 100 years ago made Panther Branch so polluted and acidic that virtually nothing could live in the water. With State Wildlife Grant funds,

the Tennessee Wildlife Resources Agency partnered with the Tennessee Department of Environment and Conservation to restore Panther Branch. They removed the mine refuse, restructured the stream channel, built a drainage system to reduce the water's acidity, and constructed artificial wetlands to remove any dissolved metals. Completed in the spring of 2007, Panther Branch will soon re-colonize with aquatic wildlife. Maintaining clean and healthy waters benefits both wildlife and people.



Panther Branch before restoration/Tennessee Department of Conservation



Panther Branch after restoration/Tennessee Department of Conservation



Golden mouse/Tennessee Wildlife Resources Agency

### **Gathering Information to Take Action Improving Wildlife Knowledge**

Tennessee’s wildlife action plan outlines the need for current and comprehensive information on the distribution and abundance of the state’s wildlife in order to make the best management decisions for wildlife and people. Over the last three years, 31 wildlife management areas, state forests, and natural areas have been surveyed for wildlife. Almost 20,000 amphibians, reptiles, small mammals, and bats were captured and released in this effort. From that, over 600 new records of species of greatest conservation need were obtained, furthering our basic knowledge of their distribution and abundance. This important information will help Tennessee fulfill its responsibility to conserve wildlife and the places they live for future generations.

### **Protecting Imperiled Land, Water, and Wildlife**

### **Restoring Alligator Snapping Turtles**

The alligator snapping turtle is a species of greatest conservation need in Tennessee’s wildlife action plan. The Tennessee Wildlife Resources Agency

has initiated a restoration project to save the alligator snapping turtle in Tennessee. Since 2000, over 400 turtles have been reintroduced into many major Mississippi River drainages in West Tennessee. Previously, lack of funds prevented monitoring of the project and evaluating its success. Now, with State Wildlife Grant funds a multi-year project to monitor juvenile snapping turtle survival and habitat use is underway. Data on preferred habitat characteristics are being collected and integrated with

mapping technology to help researchers determine the best locations for future releases, thus giving the young turtles the best chance for survival. This proactive effort will conserve the alligator snapping turtle before it becomes more rare and more costly to protect.

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### **Tennessee Wildlife Resources Agency**

Ellington Agricultural Center  
P.O. Box 41489  
Nashville, TN 37204  
<http://www.state.tn.us/twra/cwcs/cwcsindex.html>



Juvenile alligator snapping turtle with radio transmitter attached/Tennessee Wildlife Resources Agency

*Since 2000, over 400 alligator snapping turtles have been reintroduced into major Mississippi River drainages in West Tennessee. This proactive effort will conserve the alligator snapping turtle before it becomes more rare and more costly to protect.*

# Texas Wildlife Action Plan

## From Vision to On-the-Ground Action

**T**exas' planning approach was developed around current and potential partnerships with multiple organizations. From local area governments and landowners to state agencies to conservation organizations, the only viable option Texas habitats and wildlife have is to work through partnerships. The Texas Wildlife Action Plan incorporated existing plans in order to facilitate the alignment of conservation of resources and initiatives in Texas.

*The Texas Parks and Wildlife Department has partnered with 15 other conservation groups to implement the Texas Lesser Prairie-Chicken Conservation Initiative.*

### *Working with Partners to Bring Back Wildlife and Natural Areas* **Conserving Lesser Prairie-Chickens and their Grassland Habitat**

Texas' wildlife action plan aims to keep common species common. Due to the loss, fragmentation, and conversion of the native prairies they rely upon, lesser prairie-chicken populations have

sharply declined in Texas. The Texas Parks and Wildlife Department has partnered with 15 other conservation groups to implement the Texas Lesser Prairie-Chicken Conservation Initiative. Through the Landowner Incentive Program and Environmental Quality Incentives Program, biologists work with private landowners to conserve good prairie chicken habitat by controlling non-native weeds.

Several projects are underway that will provide vital prairie chicken information to guide good management actions. These collaborations are proactive ways to conserve the prairie chicken and its habitat before they become more rare and more costly to protect.



Ornate box turtle/Steve Kozlowski, U.S. Forest Service



Lesser prairie chicken/Tom Harvey, Texas Parks and Wildlife Department

### *Proactive Efforts that Benefit Wildlife and People*

## **Protecting Turtles, Snakes, and other Wildlife**

Texas' wildlife action plan focuses on conserving all wildlife diversity in the state. The Texas Parks and Wildlife Department recently banned commercial collection of all wild turtles from public waters and land in Texas. The change will protect at least 15 turtle species and more than 200 other wildlife species that were increasingly imperiled by commercial collection and sale. Three turtle varieties can still be collected on private property, including ranch stock tanks and farm ponds. A new collaboration between the Department and Texas A&M University will continue to gather information and develop long-term recommendations

about these policies. These efforts will conserve Texas' wildlife for future generations.

***Protecting Imperiled Land, Water, and Wildlife***

**Creating Important Reef Habitat for Aquatic Wildlife**

Coral reefs and their associated wildlife are conservation priorities in the Texas Wildlife Action Plan. Naturally occurring reefs in the Gulf of Mexico are limited in number and receive tremendous fishing pressure. The Artificial Reefs program recycles obsolete petroleum rigs and sinks decommissioned ships to provide ocean floor foundations for growing coral reef habitat. These underwater manmade havens provide hard surfaces required for attachment by invertebrates, animals that are the beginnings of an interactive food web that supports a host of reef fishes. By providing food and shelter, artificial reefs have enhanced overfished populations

of resident reef fish such as snapper and grouper, as well as the mackerel, shark, and billfish that feed on them. These proactive efforts conserve vital habitat for reef wildlife and provide recreational diving opportunities for citizens and tourists, contributing to local economies.

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**Texas Parks and Wildlife Department**

4200 Smith School Road  
Austin, TX 78744  
[http://www.tpwd.state.tx.us/publications/pwdpubs/pwd\\_pl\\_w7000\\_1187a/](http://www.tpwd.state.tx.us/publications/pwdpubs/pwd_pl_w7000_1187a/)

*By providing food and shelter, artificial reefs have enhanced overfished populations of resident reef fish such as snapper and grouper, as well as the mackerel, shark, and billfish that feed on them.*



Diver observing fish near an oil platform/Jackie Reid



Sinking the decommissioned Clipper/Lauren Murphy, Texas Parks and Wildlife Department

# Utah Wildlife Action Plan

## From Vision to On-the-Ground Action

The Utah Division of Wildlife Resources has forged an on-going public-private partnership from the beginning of the planning process that continued through implementation of the wildlife action plan. The plan serves as a foundation for cooperative conservation efforts. Utah identified many threats to species of conservation need and to the top wildlife habitats in the state, including development, stream channelization, environmental contamination, habitat loss, invasive species, fire cycle alteration, and human disturbance.

### *Proactive Efforts that Benefit Wildlife and People*

#### **Restoring Vital Habitat for the Bobolink**

Utah's wildlife action plan prioritizes maintaining and creating wet meadow habitat to benefit the bobolink in northern Utah. This songbird is declining in Utah due to the fragmentation of its habitat from urban and agricultural development. The Utah Division of Wildlife Resources has formed a broad partnership to restore wet meadow habitat on the Bud Phelps Wildlife Management Area in order to connect existing bobolink populations. Partners include Utah State University, Pheasants Forever, the Bridgerland Audubon Society, and Mount Logan Middle School. These groups have provided time, expertise, and donations to implement a bird monitoring program and restore vegetation. This project will also benefit other birds that use the wetlands and grasslands, including sandhill cranes, white-faced ibis, waterfowl, and several herons and egrets. By bringing partners together, the Utah Wildlife Action Plan will conserve the bobolink and its grassland habitat for future generations.

### *Working with Partners to Bring Back Wildlife and Natural Areas*

#### **Working with Private Landowners for Wildlife**

The Utah Wildlife Action Plan advocates education and outreach to private landowners to address several threats to species of conservation need and key habitats, including improper grazing practices, water development, and the spread of invasive species. Since 90 percent of threatened and endangered wildlife live on non-federal land, cooperation with private landowners is essential to recovering wildlife and preventing future endangered species listings. The Utah Farm Bureau has been a major wildlife action plan partner and has developed a Sensitive Species Task Force to assist in a voluntary and cooperative approach to wildlife and habitat recovery and conservation. As Utah's communities continue to grow, these collaborative efforts will conserve Utah's wildlife while balancing the need for continuing natural resource use and economic growth.

*By bringing partners together, the Utah Wildlife Action Plan will conserve the bobolink and its grassland habitat for future generations.*



Bobolink/U.S. Fish and Wildlife Service

**Protecting Imperiled Land, Water,  
and Wildlife**

**Conserving the Boreal Toad**

The Utah Wildlife Action Plan recommends researching the causes of the boreal toad decline in the state as well as restoring and protecting habitat. The Utah Division of Wildlife Resources and its partners are studying the impact of disease on toads, particularly the chytrid fungus. This work has demonstrated that chytrid fungus, which damages toads' skin and nervous system, is distributed throughout the state. These results have prompted other studies and the state is proactively working to conserve current populations of boreal toad. To enhance breeding habitat for the toad, the Division and its partners have constructed and restored several ponds and protected several springs. In addition, the state

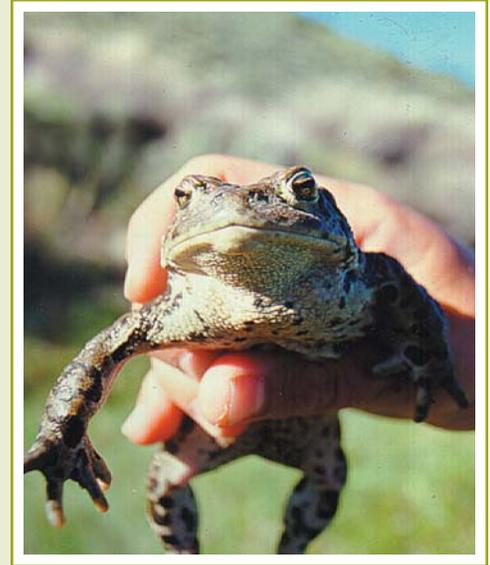
has discovered two previously unknown boreal toad populations. These proactive efforts will conserve the boreal toad and the places it lives before it becomes more rare and more costly to protect.

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**Utah Division of Wildlife  
Resources**

1594 W. North Temple  
Salt Lake City, UT 84116  
<http://www.wildlife.utah.gov/cwcs/>



Boreal toad/Utah Division of Wildlife Resources



Elk/U.S. Fish and Wildlife Service

*The Utah Farm Bureau has been a major wildlife action plan partner and has developed a Sensitive Species Task Force to assist in a voluntary and cooperative approach to wildlife and habitat recovery and conservation.*

# Vermont Wildlife Action Plan

## From Vision to On-the-Ground Action

Vermont's wildlife action plan was developed by and for local, state, and federal agencies, hunter and angler groups, conservation organizations, and the general public. It's chock-full of conservation actions for each of Vermont's species of greatest conservation need, their habitats and surrounding landscapes. By addressing both species-specific and habitat/landscape needs, Vermont can target conservation resources at the appropriate level to strategically conserve all of the state's wildlife.

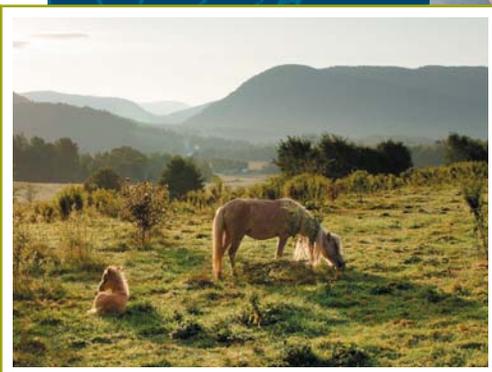
### *Working with Partners to Bring Back Wildlife and Natural Areas*

### **Helping Landowners Conserve Land for Fish, Wildlife and Future Generations**

The restoration and conservation of clayplain forests, wetlands, riparian areas and headwater streams are central to the long-term well-being of Vermont's species of greatest conservation need. The LaPlatte Headwaters Initiative in Hinesburg is a collaborative effort to conserve and restore 577 acres of rich wildlife habitat, public recreational

trails, drinking water, five miles of the LaPlatte River and its tributaries, and the northernmost known maternal colony of the federally endangered Indiana bat. In addition to providing superior habitat for several of Vermont's species of greatest conservation need, Bissonette Farm is also one of the largest undeveloped properties in the state's fastest growing and most sprawl-threatened region. Now, through a combination of conservation easements, federal and state grants, and wetland restoration, this magnificent landscape will be conserved for the benefit of future generations.

*The LaPlatte Headwaters Initiative in Hinesburg is a collaborative effort to conserve and restore 577 acres of rich wildlife habitat, public recreational trails, drinking water, five miles of the LaPlatte River and its tributaries, and the northernmost known maternal colony of the federally endangered Indiana bat.*



Bissonette Farm and horses/Kurt Budliger, Trust for Public Land



Bissonette Farm/Matt Kiedaisch, Trust for Public Land



Osprey/Steve Costello

### *Gathering Information to Take Action* **Harnessing the Power of Citizen Science for Bird Conservation**

The Vermont Breeding Bird Atlas is the state's most comprehensive review of wild birds. First published in 1985, a second volume will be released in 2008 thanks to more than 25,000 volunteer hours from contributors who walked more than one-sixth of Vermont's land to visit all the habitats Vermont offers. The new Atlas will confirm bald eagles nesting in Vermont after a 60-year absence and will show increases in peregrine falcon, common loon, and osprey. Since development pressures, acid rain, mercury deposition, habitat change, and other problems have increased significantly since 1985, the new Atlas will help identify the many birds whose populations are declining. This will help birders, biologists, the sporting community, and conservationists take action to benefit Vermont's entire array of birds.

### *Proactive Efforts that Benefit Wildlife and People* **Community Wildlife Program**

Helping communities plan for and defuse the pressures that fragment or develop intact wildlife habitat is a principal goal in Vermont's wildlife action plan. The Vermont Fish and Wildlife Department's Community Wildlife Program does just that. Only one year old, the program has been warmly received by many Vermont towns for its assistance in helping towns define and achieve their goals for wildlife conservation. The program provides local decision makers with the best-available science, landscape planning tools, and technical support tailored to the communities' specific needs and culture. The outcome in these empowered communities is better habitat for Vermont's species of greatest conservation need and improved quality of life for the town's citizens.

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### **Vermont Fish and Wildlife Department**

103 South Main Street  
Waterbury, VT 05671-0401  
[http://www.vtfishandwildlife.com/SWG\\_CWCS.cfm](http://www.vtfishandwildlife.com/SWG_CWCS.cfm)



Vermont Community Wildlife Program Outing/J. Austin

*Only one year old,  
the Community  
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has been warmly  
received by many  
Vermont towns  
for its assistance  
in helping towns  
define and  
achieve their  
goals for wildlife  
conservation.*

*The Cavalier Wildlife Management Area continues public and private efforts to safeguard the Great Dismal Swamp, which provides habitat to over a hundred different neotropical migratory bird species and many other wildlife.*

# Virginia Wildlife Action Plan

## From Vision to On-the-Ground Action

The Virginia wildlife action plan includes 925 species of greatest conservation need and focuses on the habitats that support them, such as caves, rivers, high elevation forests, coastal marshes, grasslands, and barrier islands. Most importantly, the action plan identifies the tasks needed to conserve these species and habitats on a regional basis. While many of these actions are direct on-the-ground activities, priorities for enhancing partnerships and increasing public awareness are also included.

### *Working with Partners to Bring Back Wildlife and Natural Areas*

#### **Restoring Freshwater Mussels**

Most of the freshwater mussels in Virginia are listed as species of greatest conservation need in the state wildlife action plan. The health of freshwater mussels is often an early indicator for disease and pollution that affect us all. Half of Virginia's 81 species of mussels are endangered or threatened species and others are declining at an alarming

rate. These mussels are important food sources for other wildlife, filter the water they live in, and depend on good water quality. State Wildlife Grant funds are being used to raise mussels in a hatchery and then release them into streams to bolster and restore declining populations. Cooperation with private landowners also helps restore and enhance mussel habitat. This proactive and cost-effective approach will prevent more mussels from becoming endangered and benefit the health of wildlife and people.



Musselrama/Virginia Department of Game and Inland Fisheries

**Protecting Imperiled Land, Water, and Wildlife**

**Conserving Wildlife Habitat**

Virginia’s wildlife action plan identifies habitat loss, fragmentation, and degradation caused by human development as the most serious threats to wildlife in the state. Using State Wildlife Grants and other funding, the Virginia Department of Game and Inland Fisheries purchased 3,800 acres in southeastern Virginia to create the Cavalier Wildlife Management Area. This continues public and private efforts to safeguard the Great Dismal Swamp, which once covered more than 3,600 square miles. The area provides habitat to over a hundred different neotropical migratory bird species and many other wildlife. Plantings of Atlantic white cedar and long-leaf pine at Cavalier will expand these important habitats for many species found only in this part of Virginia. As Virginia’s communities grow, this effort will help the state fulfill its responsibility to conserve wildlife and the places they live for future generations.

**Proactive Efforts that Benefit Wildlife and People**

**Eradicating Invasive Zebra Mussels**

The wildlife action plan identifies non-native zebra mussels as a serious conservation concern. Infestations of zebra mussels would result in costly impacts to water supply systems, power generating facilities, and other industries across the Commonwealth. In 2002, the Virginia Department of Game and Inland Fisheries confirmed the only known occurrence of zebra mussels in a quarry in western Prince William County. Although zebra mussels affect a variety of wildlife species, the impacts to the state’s native freshwater mussels would be catastrophic if the mussels spread elsewhere. Instead, all of the zebra mussels were eliminated,

completely removing zebra mussels from the Commonwealth. By eliminating this threat, Virginia not only ensures the health and survival of many wildlife species for the enjoyment of future generations, but also protects our commercial infrastructure from an expensive nuisance.

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**Virginia Department of Game and Inland Fisheries**

4010 W. Broad Street  
Richmond, VA 23230  
<http://bewildvirginia.org/wildlifeplan/>



Cavalier Wildlife Management Area/Virginia Department of Game and Inland Fisheries

*By eliminating the threat of invasive zebra mussels, Virginia ensures the health and survival of many wildlife species for the enjoyment of future generations.*



Destructive zebra mussels/Virginia Department of Game and Inland Fisheries

# Washington Wildlife Action Plan

## From Vision to On-the-Ground Action

The wildlife action plan gave the Washington Department of Fish and Wildlife the opportunity to reassess wildlife conservation priorities and set a new direction for the future. Specifically, the action plan process provided the impetus for a thorough re-evaluation of priorities for species and habitat conservation, a transition from statewide to ecoregional conservation, acceleration of the transition from species management to a more ecosystems-based approach, and expanding the emphasis on biodiversity conservation, at the statewide and ecoregional scales.

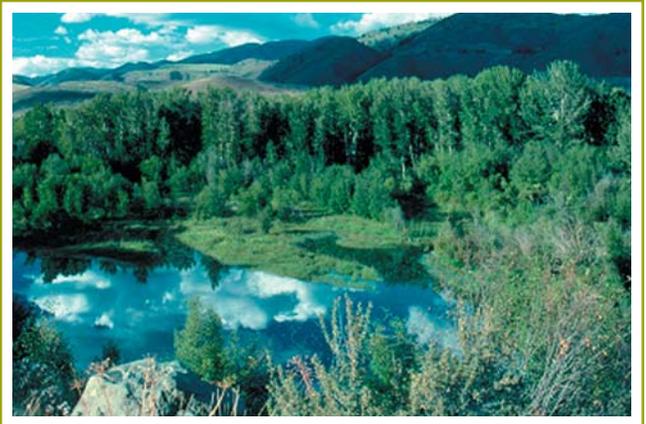
*Investments in Washington's wildlife action plan today can identify and prevent problems before they threaten other wildlife and affect people.*

### **Working with Partners to Bring Back Wildlife and Natural Areas** **Restoring the Endangered Taylor's Checkerspot Butterfly**

Efforts to restore the endangered Taylor's checkerspot butterfly and its imperiled prairie habitat embody cooperative conservation in Washington's wildlife action

plan. Much of the prairie habitat the butterflies depend upon has been lost to human use, encroaching forest, and non-native plants that replace caterpillar food plants. The first captive-reared butterflies to emerge as adults in the wild flew in the south Puget Sound area in May 2007, a successful start to a cooperative effort to recover this endangered species. More releases

of zoo-reared caterpillars are planned on state land and the Fort Lewis Army Base, where some of Washington's best prairie habitat remains. Butterflies are particularly sensitive to pollution and other environmental disturbances that affect us all. Investments in Washington's wildlife action plan today can identify and prevent problems before they threaten other wildlife and affect people.



Methow Watershed/Scott Fitkin, Washington Department of Fish and Wildlife

### **Protecting Imperiled Land, Water, and Wildlife**

### **Conserving Vital Habitat for Priority Fish and Wildlife**

Washington's wildlife action plan prioritizes landscapes for conservation purchases to forestall development that destroys critical wildlife habitat. The Washington Department of Fish and Wildlife and several partners purchased three areas that will benefit many wildlife species of greatest conservation need. Acquisition of the Methow River Watershed in the Okanogan Highlands conserves over 20,000 acres for 40 priority species, including the state's largest migratory mule deer herd. Over 60 wildlife species benefit from the



Taylor's checkerspot butterfly/Kelly McAllister, Washington Department of Fish and Wildlife

38,000-acre I-90 Wildlife Corridor, including the priority species bull trout, northern spotted owl, bald eagle, marbled murrelet, gray wolf, and Canada lynx. The Tieton River Canyon acquisition has become a broad partnership that promotes fire as a restoration tool on dry forests, and conserves nearly 8 miles of the Tieton River and adjacent rare and threatened habitats. As Washington's communities grow, these protected areas will conserve wildlife and their habitat for future generations.

***Proactive Efforts that Benefit Wildlife and People***

**Building Bluebird Boxes**

Washington's wildlife action plan prioritizes public education and involvement in conservation of South Puget Sound prairie, the most endangered habitat in the state. Through Project Bluebird, The Nature Conservancy and Black Hills Audubon bring together students and volunteers to build nesting boxes to increase the number of western bluebirds in prairies and to educate

the public about bird and habitat conservation. The western bluebird's comeback in Washington and across the country has been due to the proliferation of bluebird boxes. In addition, The Nature Conservancy and its partners have removed invasive plants, restored native grasses, and planted oak seedlings on thousands of acres of prairie. This proactive collaboration will conserve the western bluebird and the prairie habitat it depends upon for future generations.

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**Washington Department of Fish and Wildlife**

600 Capitol Way North  
Olympia, WA 98501  
<http://wdfw.wa.gov/wlm/cwcs/>

*The Nature Conservancy and Black Hills Audubon bring together students and volunteers to build nesting boxes to increase the number of western bluebirds in prairies and to educate the public about bird and habitat conservation.*



Project Bluebird kids/Washington Department of Fish and Wildlife



Western bluebird/Washington Department of Fish and Wildlife

# West Virginia Wildlife Conservation Action Plan

## From Vision to On-the-Ground Action

**K**ey features of the West Virginia Wildlife Conservation Action Plan are its emphasis on conservation actions, including a land conservation initiative, and a collaborative approach to plan implementation. The action plan is both species- and habitat-based, its core component being the 128 species and species group fact sheets that will function as mini-plans within the broader comprehensive plan. Although the plan covers a ten-year span, it is actually only the first step in a continuous, adaptive management process for collaborative conservation of the state's fish and wildlife resources and the habitats that sustain them.

### *Proactive Efforts that Benefit Wildlife and People*

#### **Restoring West Virginia Freshwater Mussels**

The health of wildlife is often an early indicator of disease and pollution that affect us all. Restoring freshwater mussels is an important conservation action in West Virginia's wildlife action plan. West Virginia waters support as many as 69 mussel species, six of which are endangered. Freshwater mussels

are important indicators of water quality since they are very sensitive to pollution. Through restoration efforts, nearly 8,000 mussels were rescued from areas threatened by development and relocated. Over 38,000 mussels of three species were raised and released in degraded habitats. To ensure the mussels' long-term conservation, seven long-term stations were established on five rivers. By conserving freshwater mussels, West Virginia protects clean waters that also provide drinking water and recreational opportunities for people.

*Through restoration efforts, nearly 8,000 mussels were rescued from areas threatened by development and relocated. Over 38,000 mussels of three species were raised and released in degraded habitats.*



Freshwater mussels/Craig Stihler, West Virginia Division of Natural Resources



Surveying cave wildlife/Jeff Hajenga, West Virginia Division of Natural Resources

### **Gathering Information to Take Action Finding Biologically Diverse Caves**

Conservation of caves and their wildlife are priorities in West Virginia's conservation action plan. In addition to regular bat and woodrat monitoring the West Virginia Division of Natural Resources worked with the Karst Waters Institute to survey the wildlife living in West Virginia's caves. More than 80 different species of cave invertebrates were documented in 282 caves. In addition, 29 new cave species have been discovered so far. Caves in Greenbrier and Pocahontas counties host particularly rich wildlife diversity. This effort culminated with the publication of *The Invertebrate Cave Fauna of West Virginia, Second Edition*. Maintaining diverse, healthy wildlife populations means cleaner and healthier natural places overall, benefiting people as well as wildlife.

### **Working with Partners to Bring Back Wildlife and Natural Areas Monitoring Stream Fish Health**

Managing and conserving state waters and their associated wildlife are important strategies in West Virginia's conservation action plan.

Launched in 2004, the Stream Classification survey documents the distribution and health of the state's 188 fish species. Working with the West Virginia Department of Environmental Protection, U.S. Forest Service, U.S. Geological Survey, U.S. Fish and Wildlife Service, National Park Service, and the Canaan Valley Institute, the Wildlife Resources Section samples approximately 60 streams annually. In addition, three long-term water quality and fish monitoring sites were established on Patterson Creek, Cacapon River, and Back Creek. These proactive efforts will provide early warning of species declines, allowing for proactive conservation actions that will help avoid endangered species listings.

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### **West Virginia Division of Natural Resources**

1900 Kanawha Boulevard, E.  
Charleston, WV 25305  
<http://www.wvdnr.gov/wildlife/wdpintro.shtm>



Stream monitoring/Dan Cincotta, West Virginia Division of Natural Resources

*These proactive efforts will provide early warning of species declines, allowing for proactive conservation actions that will help avoid endangered species listings.*



*Restoration of a portion of the Pecatonica River has led to improved water quality, conditions suitable for cool water fish, and improved habitat for grassland birds and rare species like smooth-sheath sedge, Blanchard's cricket frog, and Blanding's turtle.*

# Wisconsin Wildlife Action Plan

## From Vision to On-the-Ground Action

The action plan was developed from a landscape-scale perspective rather than a single- or even multi-species approach. The organization of the final action plan and the conservation actions identified both reflect this broad view. Three issues were common to all vertebrate groups: habitat loss, invasive species, and pollution. Threats to invertebrates revolve around a general lack of knowledge about their basic biology.

### *Working with Partners to Bring Back Wildlife and Natural Areas*

### **Restoring the Pecatonica River to Natural Conditions**

Restoration of cool water stream habitat and floodplain is a conservation action identified in Wisconsin's wildlife action plan. Years of erosion from uphill farming led to excess sediment in the Pecatonica River that degraded water quality, harmed native fish, and smothered habitat for rare and endangered wildlife. A project to restore a portion of the East Branch of the

river has removed 37,000 cubic yards of accumulated soil. The stream bank was reconnected with its floodplain, a sedge meadow protected, and a shallow pond excavated. The benefits include improved water quality, conditions suitable for cool water fish, and improved habitat for grassland birds and rare species like smooth-sheath sedge, Blanchard's cricket frog, and Blanding's turtle. Focusing conservation efforts at the landscape level provides benefits for many priority wildlife, helping to conserve them for future generations.



Blanchard's cricket frog/Rori Paloski, Wisconsin Department of Natural Resources



River restoration/Robert Hansis, Wisconsin Department of Natural Resources



Eastern pipistrelle bat/David Redell, Wisconsin Department of Natural Resources

### ***Proactive Efforts that Benefit Wildlife and People*** **Conserving Wisconsin's Bats**

The wildlife action plan identifies lack of basic information as one of the greatest threats to conservation of bats in Wisconsin. Bats play a vital role in the environment – they can eat as many as 600 to 1,200 insects per hour, including mosquitoes and crop pests. Unfortunately, bats are at risk due to their low reproductive rate and the limited number of breeding and hibernation sites available. Wisconsin's Bat Management Plan coordinates projects to increase knowledge of bats, including training citizens to collect long-term bat data. This cost-effective approach to gathering information will allow us to conserve Wisconsin's bats before they become more rare and more costly to protect, benefiting wildlife and people.

### ***Protecting Imperiled Land, Water, and Wildlife***

### **Conserving Migratory Bird Sites in the Western Great Lakes**

Wisconsin provides feeding, breeding, and migration habitat for over 280 native bird species, a third of which are species of greatest conservation need

in the wildlife action plan. The decline of migratory birds over the past 40 years has largely been due to the rapid loss of rest areas used during migrations between breeding and wintering areas. Conserving rest habitat is critical to the birds' health and survival, especially in the Great Lakes region. The area supports millions of migrating birds, linking breeding grounds as far north as Greenland to wintering grounds as far south as Argentina. A collaborative project between many federal,

state, tribal, local, university, and other conservation partners strives to permanently conserve and manage important migratory bird sites around Lake Michigan and Lake Superior. This collaboration will conserve these birds and vital natural areas for future generations.

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*Conserving rest habitat is critical to the birds' health and survival, especially in the Great Lakes region.*



Willow flycatcher/Thomas Schultz



# Wyoming Wildlife Action Plan

## From Vision to On-the-Ground Action

**T**he Wyoming Wildlife Action Plan identifies 279 species of greatest conservation need in Wyoming, along with key habitats for these species. Of these species, 44 have been included because of specific known conservation needs. The remaining 235 have been included primarily due to a lack of key data necessary to assess their conservation status. The action plan identifies the threats and challenges to wildlife and proposes actions to conserve them and the places they live.

*Landowners have been extremely supportive of these efforts, new partnerships have been forged, and many others are eagerly awaiting black-footed ferrets on their properties.*

### *Working with Partners to Bring Back Wildlife and Natural Areas* **Restoring Black-footed Ferrets**

The black-footed ferret is the most endangered mammal in the country and a species of greatest conservation need in Wyoming's wildlife action plan. In the last three years, about 280 black-footed ferrets were released in two new locations within the Shirley Basin complex. Ferrets are estimated to live in approximately 370 square miles of total area. A master's research project has gathered unprecedented data on black-footed ferret populations and developed a new technique to estimate ferret abundance. This technique can easily be adapted to other reintroduction sites and will likely save many resources. Landowners have been extremely supportive of these efforts, new partnerships have been forged, and many others are eagerly awaiting black-footed ferrets on their properties. This collaborative conservation will restore black-footed ferrets and help avoid future conflicts over this endangered species.



Black-footed ferret/Mark Goke, Wyoming Game and Fish Department



Fish sampling/Curtis Gill

### *Gathering Information to Take Action* **Conserving Native Fish in the Green River**

The Green River drainage of Wyoming is home to three fish species of greatest conservation need in the state wildlife action plan: bluehead sucker, flannelmouth sucker and roundtail chub. These fish are declining throughout their native range, due in part to water development and non-native fish. The Wyoming Game and Fish Department recently partnered with other states to conserve these fish over their entire range. Between 2003 and 2006, a crew collected fish and habitat information from 300 sites throughout the Green River Basin in Wyoming, a drainage area that exceeds 10,000 square miles. This work documented eight native fish,

and highlighted areas where bluehead sucker, flannelmouth sucker and roundtail chub still live. However, results also showed that non-native fishes are common and widespread throughout the drainage and threaten native fishes. This vital information will inform good management decisions to conserve bluehead sucker, flannelmouth sucker and roundtail chub for future generations.

***Protecting Imperiled Land, Water, and Wildlife***

**Conserving Grassland Wildlife and Habitat**

Grasslands of the Great Plains are one of the most imperiled ecosystems in the country. Grasslands in Wyoming are relatively healthy throughout much of their historical range, compared to more highly impacted region of the Great Plains. It is much more effective and less costly to conserve these areas now than to attempt to re-create them in the future. Several Landowner Incentive Program funded projects in Thunder Basin and Shirley Basin are conserving prairie

dogs, controlling invasive cheatgrass, and planting native prairie grasses. Other actions include employing a rest-rotation grazing system to improve grassland health and diversity. These proactive efforts conserve priority wildlife, including the swift fox, upland sandpiper, ferruginous hawk, mountain plover, white-tailed prairie dog, and burrowing owl before they become more rare and more costly to protect.

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**Wyoming Game and Fish Department**

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Cheyenne, WY 82006  
<http://gf.state.wy.us/wildlife/compconvstrategy/>



Swift fox/Mark Goke, Wyoming Game and Fish Department

*Grasslands in Wyoming are relatively healthy throughout much of their historical range, compared to more highly impacted region of the Great Plains. It is much more effective and less costly to conserve these areas now than to attempt to re-create them in the future.*



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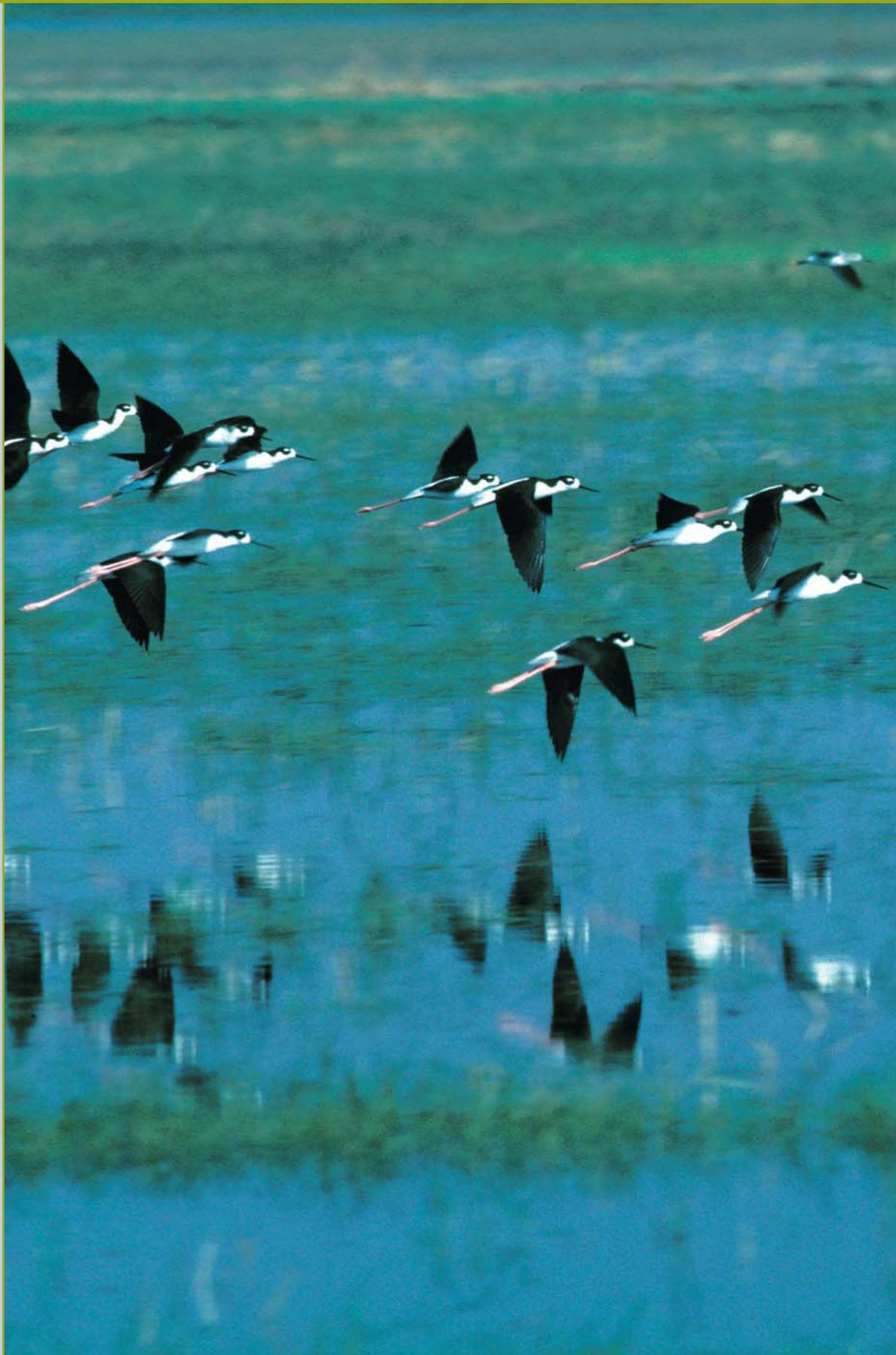
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